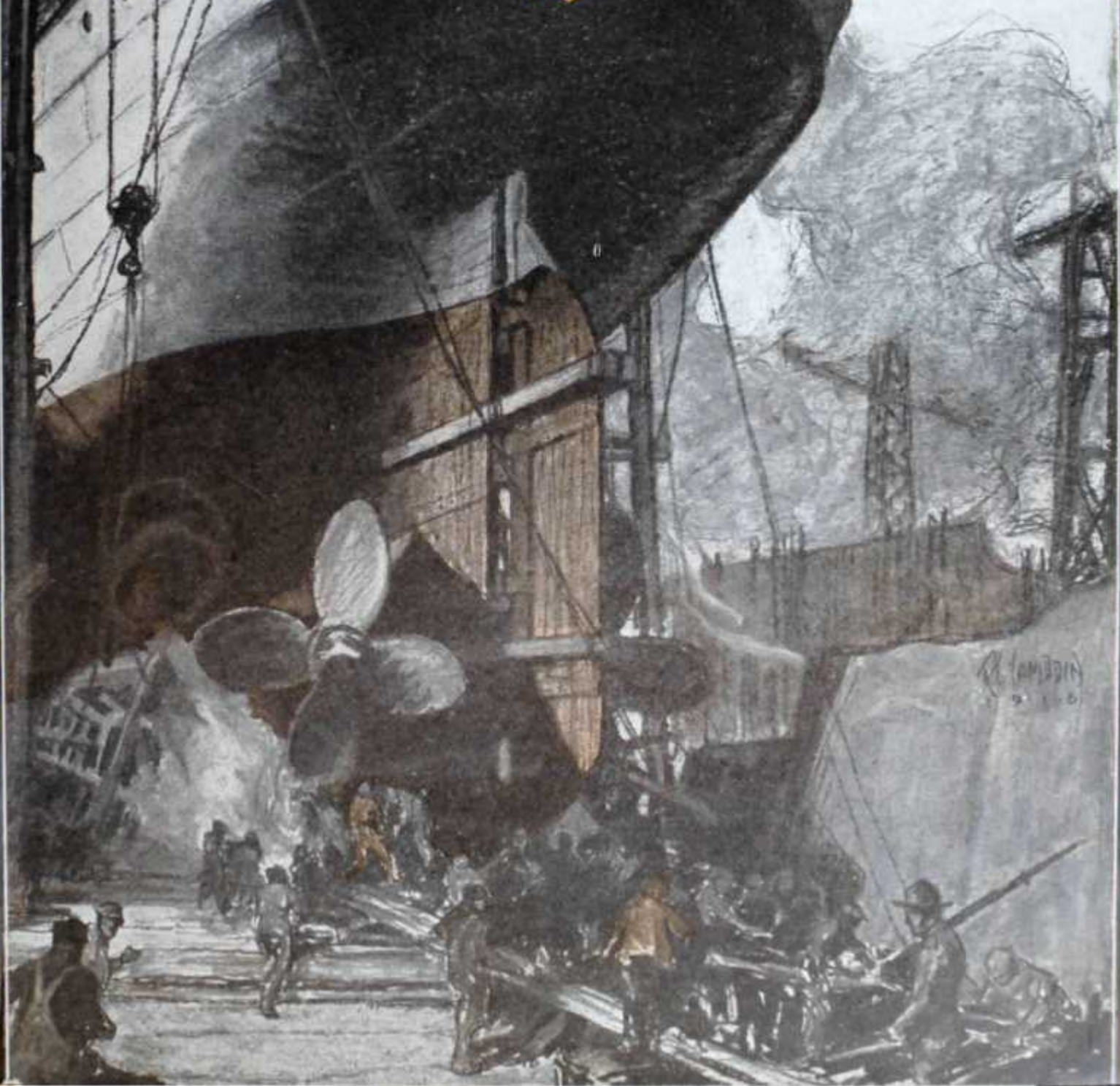


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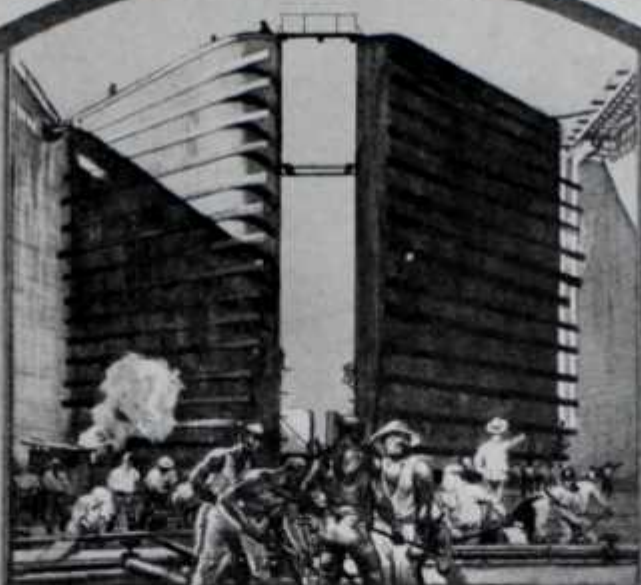
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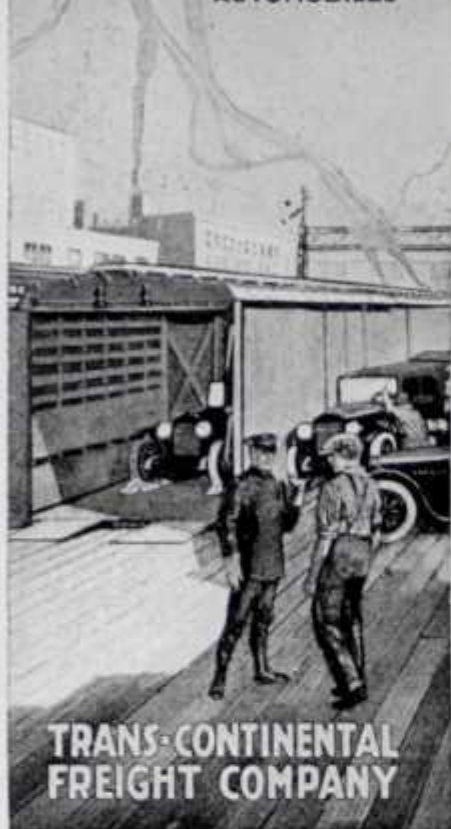
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Coal touches every man's welfare directly. On coal the nation wants certainty. Nothing more authoritative on the subject than this statement, based on an interview with the man who has charge of coal distribution throughout the country, can be had.

CLEARING THE TERMINALS... By Aaron Hardy Ulm... Page 12

Mr. Ulm describes the "sidewalk delivery" plan for the relief of congestion at freight terminals. To solve the terminal problem, experts say, is to solve automatically most of our other transportation problems. Incidentally, "sidewalk delivery" means more to business men than improved railroad service. It will work a revolution in city transportation methods which will effect savings in truckage estimated at hundreds of millions.

U. S. A. LINES ALL POINTS... By Richard Waterman... Page 14

What kind of organization for the management of the railroads is the government building up? Is it following as a model the methods adopted by the railroads after decades of experience, or striking out on new, untried lines? These questions come out in every discussion of what the condition of the railroads at the end of the war will be. Mr. Waterman, who is devoting all his time to a systematic study of the railroad situation, answers them.

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Dr. Taussig, chairman of the United States Tariff Board and eminent as a teacher of and writer on economics, tells when foreign trade is profitable to a country and when it is not.

CONGRESS SPELLS IT W-A-R... Page 18

Here, briefly told, is a wonderful story—the story of what Congress has done in a month of war legislation. It gives a look into the workings of our vast machinery of war in action. No man can read it through without a thrill. No man can read it without a clearer understanding of the resistless weight and speed we are gradually putting into this fight. It is a tale none can afford to miss.

AND SOME AN HUNDRED FOLD... By Archer Wall Douglas... Page 19

"The Stars in their courses fought against Sissera"—sang Deborah of old. Here is the tale of how they are now fighting against Germany. We shall have wheat; and hard-pressed Europe will have bread enough.

THE WOMAN IN THE MAN'S JOB... By Gayne T. K. Norton... Page 20

Among all the social changes wrought by war, none is more significant than that of the employment of women for work formerly done by men. It is a condition which may hold wonderful possibilities. It is a thing worth reading about and thinking about.

BARUCH... By James B. Morrow... Page 22

"History," said Carlyle, "is the Biography of Great Men." That is why Great Men are worth reading about. Few can write of them so engagingly as Mr. Morrow.

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THE NIGGER IN THE COAL PILE... By Robert June... Page 26

If you are the owner of a big power plant, it may add several thousand dollars a year to your net income to follow the suggestions contained in this article by Mr. June. There are bigger things than your individual profits, however, and while you may be willing to sacrifice a portion of your earnings, the country is NOT willing for you to sacrifice the public good by refusing to do your part in relieving the fuel situation.

THE ENEMY'S PLANS FOR PEACE... By Vernon Kellogg... Page 28

The plans and intentions of the Huns have long been a source of endless speculation, in which one man's guess is as good as another's. Here, however, is something by a man whose personal experience at the German Great Headquarters enables him to speak as a qualified guesser. On this subject he has a long distance record for guessing right.

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If you think this is the stereotyped doctrine on how a town can "get a factory," there is a pleasant surprise in store for you.

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FREE PORTS AND WORLD TRADE... By George Farley... Page 46

A short but to-the-point treatment of a subject about which all the world has begun to talk in connection with reconstruction after the war.

THE NATION'S BUSINESS

Published Monthly by the Chamber of Commerce of the United States
MERLE THORPE, Editor



As the official magazine of the National Chamber, this publication carries authoritative notices and articles in regard to the activities of the Chamber, its Board of Directors and Committees. But in all other respects, the Chamber is not responsible for the contents of the articles or for the opinions to which expression is given.

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Foreword

GERMANY stated complacently that we wouldn't be a factor in the Great War.

"Those who at present hold power in the great democracies," says General von Freytag, Deputy Chief of the German staff, "have risked in irresponsible fashion the futures of the peoples entrusted to their leadership."

Our will to fight is demonstrated; massed production is the issue.

German assurance is based on a Teutonic conclusion that our century of individualism in business would prevent the centralization of industrial forces necessary to support a great army in the field.

Ours has been a government that expressly discouraged any deviation from individualism. Its antithesis has been paternalistic Germany. For war Germany marshalled her industries under state domination; for the greatest good to the greatest number we enforced free competition.

That such a state of things,—not to say mind,—could be revolutionized and massed for war in time for our strength to strike in France was incomprehensible to the complacent Central Empire.

That your business and mine, units conceived, brought forth and developed through competition, could find their places in the new war-time mosaic was beyond the German ken.

This will be the answer to Germany's boast—and to civilization's hope: Can we wrench ourselves from long established relationships, join resources industry by industry, place those industries completely at the Government's service without stint or reservation?

The first year of the war has clear-cut the issue; the second year will meet it by making business so mobile that the entire strength of its various units will respond instantly to the call of the nation at arms.

America First!

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America Leads Because Its Finest Roads Are Tarvia Roads

Twenty-five years ago the roads of Europe were the best in the world.

Two centuries of incessant care had made them so smooth and firm that people thought they would never wear out. But along came the automobile, destructive alike to the roads and all road-building traditions.

The highways had not been constructed to bear this kind of traffic, and unless protected by modern methods they promptly went to pieces.

So Europe had to start even with America in developing roads that could withstand the gruelling test of the new conditions.

Now America leads.

The finest roads the world has ever seen are now constructed in this country and a very large part of these roads are built and preserved with Tarvia.

Tarvia roads are dustless and mudless, durable and automobile-proof. They give the maximum of wear at the minimum of maintenance expense.

Tarvia roads are an asset to any community because they make intercourse easier and increase property values.

They are an asset to the nation because they shorten the market haul and release labor for more productive work.

Now when we are at war and the railroads are clogged with traffic, *good roads are more necessary than ever.*

With plenty of good roads, motor-truck traffic can take care of thousands of tons of food, fuel, and munitions and relieve the railroads to a very great extent.

Every highway authority, every government official, should be interested in this problem *because good roads will help us win the war.*

Tarvia

Preserves Roads-Prevents Dust

Special Service Department

In order to bring the facts before taxpayers as well as road authorities, The Barrett Company has organized a Special Service Department, which keeps up to the minute on all road problems. If you will write to the nearest office regarding road conditions or problems in your vicinity the matter will have the prompt attention of experienced engineers. This service is free for the asking. If you want better roads and lower taxes, this Department can greatly assist you.

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Coal: Enough to Fight On—No More

We Shall Burn Our Fuel Next Winter On a War Basis As We Now Eat Our Bread

By J. WAINWRIGHT EVANS

FIRST—We are not going to have enough coal next winter.

Second—The supply will be enough to keep the people warm and to run the nation on a war basis—no more. The Fuel Administration will see that coal is distributed to accomplish that result.

Third—The Preferred List issued by the War Industries Board indicates the classes of consumers that it is of supreme importance to supply. They will get their coal. Other consumers will have to take what is left. Some of them will not get enough.

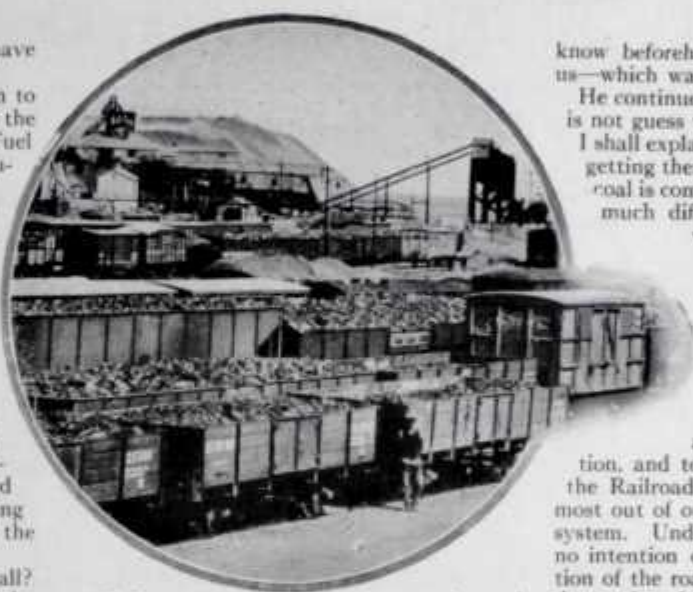
Fourth—The supply of coal for domestic consumption will be adequate in those communities that bestir themselves now and arrange to get their coal in early. Those that wait do so at their peril. Communities that take active measures toward building proper storage facilities for laying in coal will receive the full cooperation of the Fuel Administration in that work.

Fifth—Can we produce enough coal for all? Yes—But the railroads cannot haul all the coal demanded in some parts of the country, and at the same time haul all the things equally necessary, such as iron ore, steel, cotton, wool, lumber, food, guns, shells, ship plates, and the like. This condition will limit the output of coal, and the supply of it in some parts of the country, particularly on the North Atlantic seaboard. It is a problem, therefore, not of mine production but of railway transportation.

Sixth—Because of the growing flood of war orders the burden placed on the railroads is growing steadily.

There, in a nutshell, is the diagnosis of the coal situation which I got from Mr. J. D. A. Morrow, General Director of Distribution for the United States Fuel Administration, when I asked him what he thought would be the situation next winter.

Mr. Morrow is bossing the distribution of coal throughout the country. He is the man who in most cases has the ultimate say-so as to how much coal this or that industry, locality, or individual consumer can have, where they must get it from, and what kind it must be. He is the man who, jointly with the Railroad Administration, has put the zone system of distribution into effect. Also he is General Secretary of the National Coal Association. Like coal, he is a product of the Carboniferous Age.



"The readers of THE NATION'S BUSINESS," I said, "want to know what is going to happen to their coal supply next winter. Will they have coal enough? Is the fuel situation under control? What does the outcome depend on? Where do we stand?"

He looked at me quizzically through a pair of spectacles that didn't keep him from looking like a mighty young man to be saddled with such a mighty big job. "If you have a half hour or so to study this subject in," he said, "I may be able to give you a pretty clear notion of it. But if you spend a week or ten days at it, why—you'll know less about it when you quit than you do when you start."

"I spent a month on it last fall," I ventured. "What you learned then won't hurt you," he observed. "Nobody knew anything then. That was the trouble. We know plenty now, however—and a whole lot of it isn't pleasant."

"You mean—"

"Exactly. I mean that there won't be as much coal as people want; and that all the king's horses and all the king's men and all of Uncle Sam's railroads to boot can't alter that fact; and that we've got to begin right now to reef our sails, make all snug, and prepare to ride it out. Also that we can thank whatever lucky stars there be that this time we

know beforehand just what is going to hit us—which was far from the case last year."

He continued: Understand please, that this is not guess work. We have the facts now. I shall explain presently how we went about getting them. We know exactly where the coal is coming from; where it is going; how much different localities and industries will want; and, unhappily, how little some of them will get—particularly if they do not act now. The Fuel Administration, in short, is in a position to tell every industry just where it gets off.

Our job is to make the best of a difficult transportation situation, and to cooperate to the utmost with the Railroad Administration in getting the most out of our overburdened transportation system. Understand distinctly that I have no intention of finding fault with the operation of the roads. The simple truth is that the war has thrown on the railroads great burdens in a tremendous increase of traffic, particularly in the East.

I do not pretend, indeed, to understand how the railroads have performed the feats they have. Consider, for instance, the record of one branch of the Philadelphia & Reading Railroad. They used to think they were doing pretty well when they moved 1300 cars of all kinds of freight over that branch in a day. Now they are averaging nearly 1600 cars a day, and on some days have run above 1800 cars.

Load the Carriers Now

AND yet with all that increase they still can't haul enough coal, and at the same time enough raw materials, food, and the like to satisfy the needs of the region they supply.

The same general conditions obtain everywhere in the East. What are you going to do about it? They are hauling all they can, aren't they? What does it plainly mean? It means that some consumers won't get the coal they want; because if they got the coal they would be short of steel, or cotton, or lumber, or food, or some other essential commodity.

And so when I say that we must make the most of the available transportation, I am saying that this is not primarily a coal

shortage at all. It is a transportation shortage. It means that we must use every car we can get for as many hours in the twenty-four as is humanly possible. It means that we must now, while there is a chance, give the railroads all the coal they can haul; for they will have less room for it later than they have now.

There are mines, for example, that have not been producing at full capacity because no buyers were available. That is a very grave matter indeed. "No market" is a term that must absolutely disappear from the coal reports. Nothing will eliminate it so quickly and nothing will so speed up the summer production of coal as a flood of orders—a flood so big that the pressure of it will be felt by every mine in the country.—Make that clear to the business men and the commercial organizations that see THE NATION'S BUSINESS.

If we had enough cars our mines could produce fully 800 million net tons by next spring. They have the labor, the equipment, and the coal. If it were a matter of labor and equipment the lack could be supplied. But a lack of cars and locomotives is, of course, a thing that can be only partly remedied.

Our last year's production of coal was roughly 650 million net tons. During the first four months of 1918 the output was but slightly greater than in the same months of 1917. The production required for our bare necessities, on a war basis, during the coming year is possible only if we are able to maintain highly favorable conditions of labor, car service, and early buying.

At present the American people has only the faintest conception of the extent of the increase in coal consumption. It had begun long before we entered the war. With the call of Europe for supplies the industries already established increased their output; and new plants sprung up in great numbers. Where one shift a day had been the rule it grew to two, then to three,—every machine tearing along at top speed, forced to its work by a doubled or a tripled firing gang—every man of them eating into the coal pile as fast as his arms would let him.

Since our entrance into the war that pace has progressively increased. It will continue to do so. The end is not in sight.

I wish it were permitted me to say something specific about the number and location of the new war industrial plants. Some day that story can be told; but not now. All I can say is that their number is enormous, their size often colossal; and that they are springing up over the face of the country like tremendous mushrooms—almost overnight. Single plants are calling for 1 million, 2 million, 3 million tons each per year.

Coal?—Why the country will shovel in 700 million tons and be yelling for more. We could clean up 750 million and then sweep the bins. There is something epic and inspiring in the mere thought of anything so tremendous. It is one evidence of the scale on which we are fighting this war. But we have to disregard that just now and face the grim side of it.

The curtailment which will be inevitable means that we are going to have to do without many things which we have come to regard as necessities—comforts that have always been a part of our American standard of living. There is not a man, woman, or child who won't feel the pinch. Many an industry will keep

its wheels going only by reducing its output, or converting all or part of its resources to some war need. The labor turned off by one industry will have to be absorbed by another. There will be readjustments all around. You shift one thing only at the expense of another. It is all one vast tangle of interdependent conditions. You can cut out hardly a single thing without causing dislocations and trouble all along the line. You can't figure out whether the dog wags the tail or the tail wags the dog; and whichever way you decide you're likely to be wrong. Heads, I win; tails, you lose. Believe me, it's a very, very big job.

MOST men have a conception of next winter's coal outlook which is a combination of detached, unrelated bits of information and undependable rumor gleaned from the newspapers and from current gossip. The net impression is something muggy, bluggy, and foggy—chaos—with no clear voice sounding anywhere. And, so far as a man's own prospect of getting coal is concerned, he can only guess and fear.

We went to the man who knows more about it, perhaps, than any one man in the United States, J. D. A. Morrow, in charge of coal distribution throughout the country for the United States Fuel Administration; and we asked him to tell the readers of THE NATION'S BUSINESS just how he sees it and what he thinks about it. The following lucid statement is the result. It will carry comfort to many and certainty to all.

It becomes plain, then, why the Fuel Administration has issued warning after warning urging industries, and even private consumers, to buy their coal as early as possible, even if they have to borrow to do it. The response in the East has been very marked. It is not as strong as it should be in the West. Many who ordered long ago do not understand why they have not gotten their coal. I answer that they will get it in due time; and that they must bear in mind we have several million other John Smiths to take care of also.

Doing Away With the Long Haul

FOR instance, little things like this can happen: We had it all mapped out that certain important war plants were to get certain coal by a certain time. There wasn't a cloud on the horizon. Everything was looking good. Then the Shipping Board got us on the telephone one morning and said, "We have such and such ships sailing for Europe—not next week, or tomorrow, but today, in a few hours. They must have coal. Produce!" We produced, of course, by switching that coal that was intended for those waiting plants. It was some time before we caught up with them again; and we had to talk turkey with a very irate set of gentlemen before we got things straightened out.—Naturally, then, we have to make John Smith wait. But we'll get to him. He needn't worry about that early order.

I have said that we know how things will be next winter. It may be asked how we know. On what do we base our conclusions? Where do we get our facts?—One fundamental basis of our programme, so far as distributing coal is concerned, is the so-called zone system.

The purpose of the zone system, of course, is to prevent long hauling and cross hauling. It will result in an increase of at least five per cent in the amount of coal the crowded railroads can carry. We can't ask them to haul coal farther than is necessary.

The zone system has a certain obvious definiteness about it which has made it the most spectacular of our work. In reality it has been perhaps the easiest part. Figures are easy and definite. Blocking out a problem and a plan for solving it, is, under these conditions, a matter of collating facts. If being able to say how much coal we need and where it must come from were all, there would be no coal question. The establishing of the zone system has been a big job, but methodical. The demand for coal and the supply is all susceptible of definite conclusion. It is easy to say that this coal from A, B or C will logically go to D, E or F. That is clear-cut and settled.

It is quite essential, moreover, that we should be able to make decisions as definite as that. We'd have chaos otherwise. For lack of time to gather such knowledge last winter the Fuel Administration was often at a serious disadvantage.

When I went into this work last February I took the position that since we were already in a muddle, the best thing was to prepare for the year ahead and for next winter. And the first thing was to find out the terms of the problem.

When you cut down through the myriad details of the situation to the underlying essential considerations, we have had two things to do in this distribution job.

First, to find out where we stand, and what it is we must accomplish.

Second, to organize in order to attain the designated result.

Consider that first requirement—to find out where we stand. Last fall nobody knew how big the coal requirements of the country were. They couldn't tell from week to week whether they were even with the requirements or a million tons a week behind.

In planning this year's work we undertook to find out what amount of coal the United States needs for the twelve months from April to April. That meant getting a correct line on the consumption by domestic consumers served by 40,000 retail dealers; the tonnage used by nearly 300,000 manufacturing concerns; the coal consumed by railroads, ships, mines; and the quantity going into export trade.

We got those figures.

Then we set to work to add the requirements of the new war plants, some of which call for enormous tonnages. We have that information nearly completed now; and by the time your article appears in THE NATION'S BUSINESS we shall have announced the quantity of coal that each state will have to have, as well as the total for the United States.

Then the railroads, and mine operators, and the mine workers, and the government, and the people will all know the size of this job of supplying coal for the greatest industrial nation of the world with its industries roaring full blast on a war basis.

Frequent Reports From Coal Users

HERE in our offices that work is divided into its logical parts. For example, the task of getting coal into the Northwest, into New England, down to the Atlantic seaboard, and so on is all graphically presented on charts. Each of those charts is divided into fifty-two columns, one for each week. Across the chart runs a heavy black line which represents the coal tonnage required for the sched-

ule of filling that particular one of Uncle Sam's coal bins throughout the year. A red line across the chart shows how close we are keeping to schedule. We shall ask for many reports from coal users this year, but the man who grows about these reports should understand that they are absolutely necessary, for war-time coal distributors.

Each of those divisions of our work is in charge of a competent executive; and that brings me to the second part of this job—building an organization to handle it. I have had some very definite convictions on that subject, and have obtained the services of highly trained, experienced coal executives for these positions. The first big question always is the question of personnel. We now have a splendid personnel.

It took exceptional men to clear the ground. We got such executives as A. W. Calloway, Director of Bituminous Distribution. He is in general charge of the distribution of bituminous coal. He is president of the Davis Coal & Coke Company of Baltimore and of the Terminal Railroad & Coal Company of Pittsburgh. Another is S. L. Yerkes of Birmingham, who is the Assistant Director of Bituminous Distribution. He manages the details of bituminous coal distribution and acts as a kind of central trouble station in the Washington office, adjusting difficulties in all directions. We have H. N. Taylor, vice-president of the Central Coal & Coke Company

of Kansas City in charge in the southwest; and F. C. Honnold of Chicago in Illinois. Besides these there are many others of equal capacity whose names are recognized by coal men everywhere. These men work hand in hand with the mine operators.

A Friend for the Small Consumer

I HAVE talked about our work with the big industries and with the mine operators. But who is looking after the small consumer? Hasn't he a friend in court to look out for his interests?—Certainly he has. We have a very great interest in him. He need have no fear that we shall forget him or neglect him.

In each state there is a state fuel administration headed by a big man; and in each county and city there are local chairmen, all of whom are directly and closely in touch with the consumer. More than that, the application of War Industries Board rulings as to the preferred classes of consumers is worked out in each locality, and is made effective by those local chairmen under the direction of the state fuel administration. All this state and country organization now heads up here in another big coal executive, A. M. Ogle of Terre Haute, president of the Vandalia Coal Co., and receives his personal attention.

At this point let me also make it clear that none of these coal men have a thing to do with the price of coal. Prices are all fixed by another branch of the Fuel Administration.

In short, the system reaches into every remotest channel of the nation's life. No case of necessity for coal is too small for its consideration.

One natural result of the zone system will be that people won't always be able to get the coal they want and that they have been used to. Pocahontas, for in-

stance, can't go to certain regions except for special uses. Anthracite will have to be withdrawn from some parts of the country that can be supplied with other coal. The people in some regions will get coal that won't burn well unless they mix it liberally with patriotism; but so used it will keep them warm. They will have to take it because it is all that we can get to them, and for no other reason. We can't ask our war-burdened railroads to haul them better coal from hundreds of miles further off.

Some of them can't see it that way. Mr. Calloway, for instance, had an unpleasant session this morning. He was interviewed at a length that took no account of the value of his time, by a man who, by our ruling, will have to get his coal from a nearby mine. It will be different from the coal he has been using, and it will cost him \$4500 more for his winter's supply. We are sorry. We deeply sympathize. But it can't be helped.

This man roundly accused the Fuel Administration of gross incompetence for letting such things happen. Who was Mr. Calloway to sit back in a swivel chair and give orders? Where did he get his authority for so high-handed a proceeding? The gentleman, indeed, was willing to take up the cudgels and undertake to prove that Mr. Calloway had no such authority. So, you see, we still have a lot of educational work to do.

That interview took place at noon. It might have interested the gentleman to know that Mr. Calloway had been taking it easy in that swivel chair since six o'clock the night before,—wrestling with the demands of coal dealers, manufacturers, butchers, bakers, and candle-stick makers, and all their spokesmen, not one of whom, bless you, wanted a thing in the world—but his own way; which, of course, was different from all other ways.

The basic idea of our system of distribution is simply the utilization of the services of coal salesmen and coal managers who have hitherto done the work of coal distribution. We are now using these men and their system, and capitalizing their immense practical experience with local (Concluded on page 41)



"Nothing will so speed up summer production of coal as a flood of orders. We have the labor and the equipment."

CLEARING THE TERMINALS

Keep the Platform Clear, Say the Railroads, and We'll Handle the Business in Spite of All Other Obstacles

By AARON HARDY ULM

An Authorized Interview with Roy D. Chapin of the Highways Transport Committee, Council of National Defense

IT wasn't altogether shortage of cars, or scarcity of locomotives, or insufficiency of men, experts say, which caused the late, causes the present, and threatens perhaps worse freight congestion.

The most productive of the agencies which brought about the conditions which crystallized into "heatless Mondays"—with mountains of coal ready to be mined and men waiting to mine it, and with food shortages in communities not thousands of miles removed from fields in which food was rotting—is symbolized by a certain kind of postal card.

That card is the one which bears a printed form into which may be inked a few enlightening figures informing persons or firms that their carload or less-than-carload of flour, oats or meats has reached the station or the pier and must be taken therefrom within 48 hours from 7 A. M. next after arrival.

Because it is under suspicion, men say that the card, and all that it stands for, must be wiped out, at least in our large cities. Men in the mercantile world, men in the trucking business, men operating railroads—all say these things must go. Before this is printed, the first step in that direction may have been taken by the national railroad administration. The first step will be a short one, probably in only one locality, but it may be a step toward a revolutionary readjustment of our entire system of moving freight to and from terminals, not only in New York and Chicago, Boston and Philadelphia, but also in Piqua and Mud Valley, Oskosh and Kalamazoo.

For the tiniest hamlet is interested, the metropolitan areas are interested, the county seats are interested, and the small cities are interested. A condition in New York which results in cutting down the total amount of freight which the railroads of the country can haul means that Mud Valley may not get the freight service which its welfare demands.

The keynote of the campaign for new conditions was struck in the declaration of a railroad man, "Keep the terminals clear or let us keep them clear, and we'll handle the business in spite of all other obstacles."

Keeping the terminals clear means, for one thing, cutting down delays in loading and unloading freight in the big cities, chiefly at the ports. An expert figured out that the American freight car spends, year in and year out, 11 out of every 12 hours standing still. Much of that time is wasted waiting at stations.

If there were an unlimited supply of cars, endless miles of sidings, vast covered concourses for stations, piers that could be measured only in acres and bulkheads the size of bays, it wouldn't matter. But not one of these things is and most of them can't be. The location and development of cities and the whims of nature, with considerable lack of foresight perhaps on the part of those who designed railroad terminals, place severe limitations on space allotted in most big cities to the receipt and dispatch of railroad freight. Stations and piers fill up so that cars can't be unloaded, producing a "back water" congestion which often ends in stagnation.

Some statisticians assert that of the two billion dollars spent annually in peace times on freight, four-fifths is consumed by useless delays at terminals.

For 50 years no improvement has been made in our system of handling freight at depots and piers. The transition of horse to motor equipment has in some measure been delayed by the fact that it costs less to have a horse team stand idle than a motor truck. Many New York shippers cling to the horse vehicle because a great portion of its time is taken up in waits due to congestion.

Consignees as a rule are not willing to admit that any great part of the delay in moving freight is due to dalliance on their part. Let one of them be heard:

"When we get notice that a shipment has arrived, we send our trucks down for it. If conditions happen to be normal, the teamster presents his bill of lading to the freight clerk, who tells him as nearly as he can where the car was unloaded. The driver goes to that part of the freight station, sorts over the freight as best he can, and, after discovering his shipment, arranges with a checker to get the freight. He gets it and goes away, but if he has other bills of lading he must go through the same process again; if he has to get freight from another station, he must go there and go through with it.

"Usually his vehicle goes to the station empty, probably passing on the way others taking freight to be shipped. Frequently, if not generally, he leaves the station with only a part of a load. If freight is to be shipped, a similar process is involved. It is the same if it is a ten-pound box or a ton. Unless it happens that there is freight waiting for his concern or some other for which he is working, he deposits his consignment and goes away with an empty truck, though the station be jammed with undelivered shipments.

"If conditions happen to be abnormal, as they frequently are, he may have to wait in line for his turn, because of the congestion of vehicles in the limited area. Lately, this latter necessity has been largely the rule at the railroad piers in New York."

To Hasten the Tarrying Box-Car

TERMINAL facilities in New York have not been increased for the last 10 or 12 years; they can't be materially increased except at great cost in money and time. At those piers trucks stand idle for hours and sometimes for days waiting to load or unload.

"One day last week," said a business man, "our truck reported at a certain pier and the driver was told if he or a clerk would come down the following morning at about 5 o'clock he might, when the office opened at 8.30, receive a permit to ship two days later.

"He reached there a little after 5 the following morning and found 156 waiting in line. The first man had arrived at 3 A. M. At 8.30, 20 permits were issued and the others were told to make another attempt next day."

How to hasten the tarrying box-car on its way is the problem on which the Highways Transport Committee of the Council of National Defense, under the direction of Roy D. Chapin, has been working for months, and the problem which the railroad administration, through James S. Harlan, of the Interstate Commerce Commission, has been investigating with reference to the situation in New York. The matter is now in the hands of Alfred H. Smith, regional director of railroads for the Eastern district, who will initiate and direct the first experiments.

The first thing to be done is to devise means for the removal of freight from cars, stations and piers with all expedition. Other problems, like the carrying of freight to the stations, and the relief of street congestion, will be dealt with only as they bear on the first and as experience points the way.

In place of the present system, or lack of system, of freight delivery, the plan is to substitute some form of store-door or sidewalk delivery. The 48 hours of grace now allowed to a consignee—a period often stretched to 72 hours—in which to make up his mind to have his goods removed from station or pier, and then to get them removed—not always an easy or expeditious process, as we have seen—would be done away with. Freight stations would no longer be used as warehouses.

The new plan would put an end to a form of merchandising and brokerage predicated upon the using of terminals as storage plants. Thousands of cars of produce are shipped to brokers who have no equipment except desks, and who sell directly from stations or sidings, paying demurrage when necessary. Store-door delivery, generally adopted, would force these men to provide warehouses at their own expense.

Demurrage, too, with its attendant evils or blessings—according to the point of view—would it is believed, be abolished. There would be no such thing as holding a car and paying the penalty for non-removal of goods within the time-limit. For there would be no time-limit. The freight, instead of the ancient postal card notice of its arrival, would be sent to a consignee.

Goods not accepted on tender at the street address indicated by the tag or markings on the package, or at the place named in advance by the consignee, would be carted away to a public warehouse and held at the consignee's expense, as is the rule now with regard to L. C. L. freight not taken from stations within the time-limit.

The plan contemplates amalgamation or co-ordination with trucking, so that the shipping of goods from the factory or store of the seller to the store or warehouse of the buyer would consist of one transaction instead of several, as now. The idea is not new, it is not American in origin. America, in fact, is about the only up-to-date country in which it hasn't been adopted. Store-door delivery of freight has been the vogue in England and Canada so long that it isn't looked upon in either of those countries as anything out of the ordinary.

In England the railroads own the trucking facilities used in the large cities and in smaller ones have arrangements that produce the same results. Most package freight is shipped "C & D," that is, cartage and delivery included. The only classes precluded are the heavy and bulky commodities, like coal, iron and bricks, shipped usually in car-load lots. Shippers can exercise the option of doing their own carting and a few do, but the railroad method is so much cheaper that it is usually accepted in toto. Likewise in Canada, except there the railroads do not actually own trucking facilities but work through them on a pooling arrangement that reduces the handling of most freight to a single transaction for the shipper. The railroad collects for all.

The same facilities used for delivering freight are employed in picking up outbound shipments. Cities are "zoned" in the manner in which American express companies divide them, being cut up into stations and districts which feed and are fed by the railroads with automatic precision. In London, goods are trolleyed at night between the main depots and the sub-stations from which goods coming in are distributed or at which those going out are collected.

Ten Trucks On An Errand For One

AN example of what we might look for from a coordination of railways and trucks in this country is afforded by what was done in Hartford last winter. Cars of freight hauled up in the railroad yards until a condition of chaos worse confounded seemed imminent. Relief was obtained by pooling all of the trucking facilities of the community and putting them under a single direction. Teams went to the yards concertedly, picked up freight as they came to it, gathered full loads and hauled them to the consignees, no matter who these happened to be. A flour dealer's teams were as likely to haul a hardware merchant's shipments as his own, and vice versa. By this method an apparently insuperable situation was cleared up in a few days. A plan somewhat similar was adopted in Chicago during the last teamster's strike.

It is estimated that such a scheme of coordination in New York would not only relieve congestion at piers but increase port facilities

ties 50 per cent by releasing rail equipment. Incidentally, it is asserted, New York could effect a saving of something like \$30,000,000 a year in truckage charges. As pointed out in the New York Evening Mail by Andrew Kennedy, "If ten parcels are waiting at Forty-Second Street for delivery, ten trucks go for them, when only one might handle the ten."

Those ten trucks bent on an errand that one could perform not only congest the pier or the station but also add to street congestion, which in the larger cities is a serious problem of distribution. If in addition to the ten parcels to be taken away there had been ten parcels to be at the station for other concerns, ten more trucks probably would be employed to take them there. Thus twenty trucks may spend hours getting in each other's way trying to do something which one might do quicker and better.

Under the English and Canadian systems only one truck would have been used. The cartage cost would have been added to the freight charge and, through being distributed among twenty different establishments, would represent great saving.

Prevailing conditions would get short shrift if the drastic measures advocated in some quarters were put into effect. The situation in New York has received a good deal of attention, and those who are for strong action believe that that town would be a good one to begin in, so that it would be an example to the rest of the country. It is interesting to note some of the facts brought out by the investigations carried on in that city.

1. Pier facilities do not afford room for the efficient handling of the number of teams necessary, under existing individual methods of hauling, to move the freight.
2. Teams employed are not used to capacity.

Movement of freight directly from the car to the store doors of Smith, Jones and Baker—one truck carrying the three shipments, and, on its return, picking up the goods Smith, Jones and Baker have to deliver to the terminal—would solve perhaps our greatest transportation problem

A skilled investigator found that the average wait at one railroad pier was 40 minutes for every truck with outbound freight, and most of them go away empty after unloading.

"Most of the trucks coming for inbound freight arrive empty," says the same report. "Instead of going away fully loaded, less than half have anything like a full load. . . . The average load of the trucks as they leave is only about 60 per cent of the possible load."

Store-Door Delivery a Suggestion

ONE of the first things to be done in New York is to find some means of keeping freight moving through the neck of the transportation bottle—chiefly the piers. It is believed that much relief can be secured by some plan that will compel every team visiting a pier with shipments to carry away a full load of incoming freight. Inbound freight at the piers exceeds outbound as 65 to 35.

Substitute freight station for pier and the shoe would fit many localities besides New York.

Railroad men gave considerable thought to the subject prior to the war. John F. Stevens, the noted engineer now heading the American railway commission in Russia, worked out an elaborate plan for New York City, based largely on the London system. It contemplated a big joint freight depot in the Jersey meadows, a tunnel for trucks under the Hudson, and district stations throughout the city, all to be manipulated exclusively by the railroads. It was abandoned through fear that the railroads would not be permitted to make proper charges for the extra service rendered cause it might be held as violating man Act. Gov-

for the extra and also have been the Sherman control of railroads removes the ob- (Concluded on page 46)



U. S. A. LINES ALL POINTS

How the National Railroad Administration is Organizing in Order to Weld a Thousand Competing Companies into One Transportation System

By RICHARD WATERMAN

WOODROW WILSON, commander in chief of army and navy by virtue of the Constitution, and arbiter of transportation by the enactment of legislation for war specially designed, wrestled with the question of what to do with the railroads of the country. Upon his decision world crisis might turn, political systems fall, all human institutions be altered for good or bad. That decision might turn out to be one of the momentous judgments of history.

The force we should exert in the war would depend in large measure upon what we did with the railroads. It was a time of anxious suspense. While the President wrestled between the devil and the deep sea, seven other devils of doubt tormented the minds of the people. Would leaving the railroads under private control imperil the Allied cause? Would taking them in hand by the government bring us to confusion worse confounded?

It was a terrible power which was placed in the hands of the chief executive, that power to "take possession of, assume control of, and utilize" any or every system of transportation of any kind whatsoever. Authority was his to do what he might see fit, and that is why I have called him the arbiter of transportation.

The President's decision was for government control as a war measure. On December 28, 1917, in the name of the government, he "took possession and assumed control of" the railroads, and, through the railroad administration, has since been "utilizing" them to win the war.

The government thus became responsible for the conservation and the operation of 1000 railroads, officered and manned with 1,800,000 employees, property into which \$18,000,000,000 in savings had gone and on which the best business and engineering ability of the country had spent itself. To put it in another way, those were the physical proportions of the plant upon which the government was to rely in doing extraordinary things in the way of transportation. With it came to the aid of the government the effective railroad organization developed through so many years in this country, and the good-will of railroad men.

William G. McAdoo, as director general (the picture of Woodrow Wilson now fades out so far as the active management of the railways is concerned), cut the national railroad administration to the pattern furnished by the railroads. He determined upon an organization based on successful railroad experience, one which would be understood and approved

by every experienced railroad man. His first step was to select as staff officers a group of the ablest railway executives in the country—men who had spent their lives in building and operating railroads.

It is too early to form an opinion as to the probable outcome of our government's experiment in the sizable task of operating 260,000 miles of railroad as a unit. We have the

duties similar to those of the general counsel of a railroad. He deals with all of the legal questions that arise in the process of adjusting relations between the railroad administration on the one side, and carriers, shippers, national and state commissions and the general public on the other.

The director of the division of capital expenditures performs duties corresponding in part with those of the vice president in charge of finance, and in part with those of the chief engineer in charge of new construction. He receives and passes upon the reports made by the railroads as to their budgets for necessary expenditures for improvements, and has supervision over all capital expenditures. He is now at work on the reports received by the director general in reply to the questionnaire sent to every railroad in the United States asking for information in regard to the estimated cost of additions and betterments (including equipment) and road extensions that should be added during the year 1918. The roads were asked to include only items "absolutely necessary for the protection and development of the transportation facilities required to meet the present and prospective needs of the country's business under war conditions." With the aid of an advisory engineering committee in each region, the division of capital expenditures is now determining what extensions and improvements will be permitted and what capital expenditures allowed.

When it decides that a certain improvement or extension is necessary, the authorization is sent to the division of finance and purchases for execution. The director of this division makes whatever arrangements may be necessary to aid the railroad affected in securing sufficient funds without interfering with other government financing, and provides through its central committee for the purchase of rail and additional equipment and through regional committees for the purchase of the other materials necessary for the new construction.

Meeting Their Financial Obligations

THE director of the division of finance and purchases is responsible for the coordination and supervision of railroad purchases of materials and supplies; and for the development of plans for meeting the financial requirements of the railroads, whether their needs relate to the taking up and renewal of maturing obligations and the issuance of new securities, or to financial provisions for betterments and additions. In the financial work of the division he is assisted by an advisory

The Pittance

By CARL AVERY WERNER

If mine were the wealth of the Aztecs,
If mine were the treasure trove
Of the silver and gold the gray rocks hold
In the hills of the land I love,
Ah, then I would say to my Country:
"Dear land where my fathers died,
The sinews of war are mine—and more;
Take all—and my heart beside."

**If mine were the gifts of genius,
If mine were a master mind
To delve in the deep where secrets sleep,
And hidden forces find,
I would say to the land that bore me:
"Rejoice! I bring good cheer!
For I come with a store of new-found lore,
And the end of the night is near!"**

**If mine were the arms of millions,
If mine were the hands of hordes,
I would crush the foe with a great grim blow
And kill with a million swords.
If mine were the limbs of legions,
If mine were the will of the world,
I would storm all Hell till the ramparts fell,
Nor once would the Flag be furled!**

**But a plague on my poor impotence!
Of wisdom and wealth I've none,
Nor super-power for the utmost hour—
Alas, I am but one,
So I weep in my frail devotion
To the land that made me free;
For I've naught to give, that the Flag may live,
But the life God gave to me!**

setting of war and the first acts of the drama: the climax is in the future, and the oracle is silent. It is possible, however, to describe in some detail the make-up of the staff and the duties of the various divisions, as well as point out by concrete examples some of the steps already taken in the process of welding 1000 competing railways into one transportation system.

The form of organization follows that of our larger railway systems. The divisions of the central organization correspond closely with the administrative departments maintained by every large railroad, and directors of these divisions are charged with duties similar to those performed by vice presidents or other high railroad officials. For example, the director of the division of law performs

committee of three, one member being from the north, one from the south, and one from the west; and in the matter of purchases, by a central advisory committee and three regional committees composed of men drawn from the purchasing departments of leading railroad systems.

The finance section of this division has already been called upon to aid several of our most important railroads in meeting their obligations. A few weeks ago, for example, the director general was advised that about \$44,000,000 of one-year collateral trust notes issued by the New York, New Haven and Hartford Railroad, and secured by the greater portion of the treasury assets of the New Haven system, would mature on April 15. It was obvious that under present conditions the company would find it impossible to secure a renewal of these notes without the aid of the administration. Therefore, after careful investigation the administration, on the recommendation of the finance division, advanced \$43,964,000 to the New Haven company.

New Locomotives For Next Winter

THIS section is also responsible for the purchase of new equipment. In order to standardize designs for new locomotives and for new freight cars to be used on all of the railroads in the country, and thus to substitute a few scientifically worked-out designs for the numerous miscellaneous ones now in use, a committee of experts was appointed. About May 1 the preliminary work of standardization was completed and the director general ordered 1025 freight and passenger locomotives that will cost about \$60,000,000, and 100,000 freight cars that will cost between \$250,000,000 and \$300,000,000. The orders were all placed on the basis of the minimum bids as to costs for labor and overhead charges with the understanding that any reduction of costs that may be obtained from these fixed prices will be divided equally between the railroad administration and the builders, but any increase in these costs will be borne exclusively by the builders. It is announced that the deliveries of locomotives will begin in July and that most of the new engines will be assigned to eastern roads where the shortage of motor power is greatest. It is hoped that a large proportion of the entire order of cars will be completed in time for the fall and winter business of the railroads.

The director of the division of traffic deals with matters involving traffic relations between carriers, and those between carriers and their patrons, including the classification of traffic, the determination of charges, and the settlement of claims made by passengers and shippers. Under competitive conditions, each road acted independently in determining what business would be accepted and how it would be routed to its destination. Under present conditions, the division of traffic determines what business shall be accepted and what must be refused by each railroad, in order to avoid the congestion that would result from overloading present railroad facilities. The division of transportation, in its turn, determines the route by which shipments shall be carried to their destination. In some parts of the country there is no immediate danger that the railroads will be blocked even if they accept all of the traffic that is offered, but on roads leading to the seaports from which the government is shipping its supplies and munitions to our own army, and to the Allies, and on roads leading to ports from which commercial shipments are made, it is necessary for the administration to control the traffic and to give preference to the most important shipments.

Two central advisory committees have been appointed to aid the traffic division in accomplishing this purpose—the inter-regional traffic committee, which is now making a study of the larger traffic movements with a view to seeing what steps can be taken advantageously to shift the traffic from the more congested gateways and the more congested ports, and what will be the most advantageous distribution of this traffic; and the board of traffic managers, appointed to represent the railroad administration in other government departments, including the Shipping Board, the War Department, the Navy Department, the War Industries Board, the Fuel and Food Administrations. The traffic managers board is intended to serve as the channel through which the director general can keep in touch from day to day with the transportation needs of government departments.

The director of the division of transportation has general supervision of the work of actually moving the traffic accepted from government departments and private shippers throughout the country. He has under his immediate direction seven sections—the car service section, in charge of the re-location of freight cars, the provision for preference in car supply and movement where more than ten cars are involved, and the recommendation of embargo policies and exemptions as the needs of the government, seasonable requirements or other circumstances may demand; the car repair section, which supervises the condition of and repairs to freight and passenger cars in all railway and outside shops; the inspection and test section, in charge of the inspection of materials and work in connection with the construction of standard locomotives and cars; the locomotive section, which supervises the condition of and repairs to locomotives; the fuel section, dealing with problems involved in the transportation of fuel; the marine section, which supervises the operation of shipping under the control of the director general and the coordination of all other shipping (including that on the Great Lakes) and the railroads; and the safety section, which has direct supervision over the safety work on all roads.

The Case For the Consignee

THE policy of the car service section in the matter of the issuance of permits will serve to illustrate the methods used by the division of transportation in dealing with the problem of moving traffic. The car service section takes the position that an embargo is the only protection which the public has against a condition of congestion which would paralyze transportation lines and render them incapable of furnishing service, and therefore that they have no moral or legal right to put any car through an embargo for one consignee at the expense (as is always the case) of other consignees unless they can justify giving the freight in such car preference as a matter of common good.

Hence, they require applicants for permits to develop each case from the standpoint of the consignee instead of the shipper, taking into consideration the nature of the freight, the question of its possible purchase, locally or near the point of requirement, the amount on hand, the rate of consumption, the amount in transit and rate at which the freight for which the permit is desired must actually come forward in order to prevent a shutdown or reduction in output of important products. They find that with these principles in mind it is not difficult to convince any fair-minded applicant for a permit that unless he has a case which will meet the required test he should not ask for that which can only be given

at the expense of others, and which, if accorded to others, must be at his expense.

Facing Labor Demands

THE labor problem is one of the most important that the director general is called upon to solve. To aid him in this part of his work he has created a division of labor, placing at its head a director who discharges some of the duties usually performed by the general manager of a railroad. This director not only deals with the problem of wages and working conditions but also aids railroads in obtaining sufficient labor and strives to promote a better understanding between railroad officers and employees.

As soon as the director general entered upon his work he was confronted by a demand from 1,800,000 employees of all classes for a wage increase amounting to more than \$1,000,000,000, about 66 per cent of the entire wage bill of the railroads. He at once appointed an advisory wage commission charged with responsibility for making a general investigation of the compensation of persons in railroad service, the relation of railroad wages to wages in other industries, the conditions respecting wages in other parts of the country, the special emergency respecting wages which exists at this time owing to war conditions and the high cost of living, and the relation between different classes of railroad labor. On May 9 this commission submitted a report recommending a wage increase of about \$300,000,000, and defining certain fundamental principles on which it would, in the opinion of the commission, be wise for the administration to base its policy with respect to the hours, wages and working conditions of employees.

The division of public service and accounts represents a desirable extension of the functions usually performed by railroad officials. The director of this division supervises inventories of the railroad properties of which the government has control, together with receipts and expenditures in their operation, duties ordinarily assigned to the comptroller of a railroad. In addition, he has charge of complaints as to the adequacy of service rendered to shippers and consignees, thus representing the interests of farmers, manufacturers, producers and consumers generally.

In the latter part of January, on recommendation of this division, the director general issued a general order to officers and directors of railroad companies "that the carriers' operating revenues shall not be expended (1) for the payment of agents or other persons who are employed in any way to affect legislation; (2) for the employment of attorneys who are not actually engaged in the performance of necessary legal work for the company; (3) for the payment of the expenses of persons or agencies constituting associations of carriers unless such association is approved in advance by the director general, or (4) for any political purpose or to directly or indirectly influence the election of any person or an election affecting any public measure."

This order has resulted in withdrawing railroad support from a considerable number of organizations which, under competitive conditions, were supported by the carriers to aid them in their efforts to unify the operation of the roads. The railroad administration regards it as unnecessary to support these organizations during the period of the war since the administration itself is charged with responsibility for the desired unification.

The railroad administration is still in the making. From day to day new committees are appointed with advisory or administrative functions, new men (Concluded on page 43)

Slender Props for Foreign Trade

Several Practices Which Will Not Support a Continuous and Successful Expansion Because They Do Not Square With Sound Economic Principles

By DR. F. W. TAUSSIG

Chairman United States Tariff Commission

IN THE NATION'S BUSINESS for May, Dr. Taussig began an examination of certain popular conceptions of the relation of foreign trade to general prosperity, in order to determine when such trade is profitable to a nation and when it is not. After pointing out that many persons, most persons perhaps, think of foreign trade, if not as the one fundamental source of prosperity, at least as a peculiarly important one, regarding it as the test and measure of national gain or profit, the main thing to be striven for by commercial policy, Dr. Taussig laid down the principle that our foreign trade, our combined imports and exports, promote our prosperity as a people only if we produce effectively and cheaply commodities which we export, and exchange those commodities on advantageous terms for the things which we import. In the present number, he analyzes, in the light of that principle, some of the devices for the promotion of foreign trade. His study of the subject will be concluded in our issue for July.—The Editor.

LET us consider some devices for promoting foreign trade which appear dubious because not consistent with the fundamental principle of effectiveness. These devices are not indeed to be condemned offhand; but they call for critical examination, for careful discrimination, perhaps for rejection.

First of all, and most dubious of all, are export bounties—bounties paid directly by governments upon the export of commodities. These are, on the face of it, a confession of lack of effectiveness. They mean that the commodities cannot be exported upon their merits. True, they may mean low price in the sale of the commodities, since the exporter makes up for a price in itself unprofitable by the bounty paid him. But that very circumstance indicates that the sales do not mean low cost or, what amounts to the same thing, they do not mean high effectiveness.

The bounties do not really cheapen your goods in the important sense of cheapness; they mean that a payment from the public purse makes up for a lack of effectiveness. Remember that, in the last analysis, the labor which procures imports is the labor which serves to produce your exports. If an export bounty is paid, you must reckon as part of the total cost of your exports not merely the labor directly applied to them, but also that which is involved in the export bounty. The money for the export bounty comes out of taxes; and taxes mean that a part of the community's labor is turned by the government into the channels for which its payments are made. In addition to the labor needed for producing the exports, we must reckon the labor involved in paying the bounty. A country simply deceives itself when thinking that it gains by this process.

No Public Bounties on Exports

ONLY if we accept the old and long discarded notion that any foreign sale whatever is profitable, can we conceive of export

bounties as being advantageous to a nation. If, indeed, we take the view that an export sale in itself necessarily constitutes a profit; if we are so ill-informed as to think that the gold actually flows in for every item of exported goods, and so ill-advised as to believe that an unending inflow of gold makes a country unendingly prosperous, then indeed we may think that export bounties promote fundamental prosperity. But the fallaciousness of this way of looking at the matter does not need to be dwelt upon. The exports signify not gold or riches, but imported goods got in exchange; and if in the payment for those imported goods we also tax ourselves in order to pay a bounty, we lose so much of the real gain from foreign trade.

It is fair to say that direct public bounties upon exports have virtually ceased. The most striking instance of their payment upon a large scale was in the bounties upon the export of beet sugar which were paid for some twenty years preceding 1903 by various continental countries. All these countries sinned, and all of them became in due time thoroughly repentant. The senseless rivalry in bounty paying upon exportation of beet sugar went so far as to make serious inroads upon the public exchequers of several countries, and it was a real relief to them when Great Britain in 1903, by refusing to remain longer the one country into which bounty-fed sugar could be dumped upon a considerable scale, put an end to the whole business.

Selling Abroad at Low Cost

THE second dubious device, and one in which the problems are more difficult and complicated, is that of special transportation rates for export business. To simplify the question of principle here involved, and strip it of the political and naval problems that are connected with ocean transportation and the merchant marine, let us confine the discussion to rates for inland transportation. Railroad rates constitute the most conspicuous and the most debatable problem. It must be admitted that most governments do in fact follow the practice of allowing special railroad rates for export business; not only Germany and France and the countries of the Continent generally, but the United States also. Our inland rates to the seaboard on various commodities are lower for export business than for purely domestic business. The Germans are often roundly accused of making reprehensible use of this device. It must not be forgotten that we have done the same under private management of railways, and that our governing authority, the Interstate Commerce Commission, has repeatedly sanctioned the practice.

It is obvious that if a railroad were to transport for nothing—if it were to give away the transportation once for all—the case would be the same as that of an export bounty. The article so transported could indeed be sold abroad at a comparatively low price. But that low price would not be a sign or a consequence of effectiveness in production; for

there would not be included in the price a real and important element of actual cost, namely, the transportation expense. In such a case we should not be exporting at really low cost; we should be concealing a substantially higher cost. The item of railroad transportation would not be obliterated or saved, but would be simply paid for in some other way. It would be made up either by the railroads themselves out of their general profits, or by the domestic shippers and consumers through higher rates upon domestic business, or by a combination of these processes.

If, now, transportation is not given away outright, but is offered at reduced rates on export business, the case seems to be in essence the same, only not to proceed quite so far. To the extent to which the process of reduction or favoritism is carried there is a concealment of real cost. Consider the several elements of the situation. The export rate is lower than the domestic rate. But that domestic rate itself may be presumed to be reasonable, that is, reasonable in view of cost of carriage, and based principally on cost of carriage. All our regulatory legislation, our Interstate Commerce Commission, all our state commissions, are established to insure the carriage of traffic at reasonable and proper rates; and reasonable and proper rates are such as conform upon the whole to cost of carriage. If, now, the domestic rate is reasonable, and the export rate is lower than the domestic rate, the export rate will seem necessarily to be less than cost of carriage. Such a special export rate becomes a device for artificially forcing the exports, and is essentially like a bounty; it means sham effectiveness, not real effectiveness.

It must be admitted at once that this is by no means everything that can be said on the problem of railway rates on export business. Special rates are often justified by special traffic conditions. Special rates upon export traffic may be justified in view of special conditions. But it would seem that they should be granted only on the same principles as any other special rates,—perhaps in view of unusual competition by alternative routes or the utilization of equipment otherwise idle. They should not be granted solely on the ground of export destination; that would lay them open to suspicion on the same ground that export bounties are open to suspicion; the case for them must be affirmatively established, like that for every special rate in every branch of railway transportation.

Turn now to a third device, also questionable. What is to be said of special prices made by producers for export business—lower prices than are asked and expected on strictly domestic sales? Are they good, and are they to be encouraged?

On the face of it, lower prices for exported goods than for the identical goods sold in the domestic market seem open to the same objections as transportation favors and seem equally dubious. Here, too, let us fasten attention to special prices resting solely upon the fact of export destination, just as, in the

case of railways, attention was directed to railway rates made solely in consideration of export movement. We seem to be confronted by a similar dilemma. If the export price is specially low, the domestic price must be made specially high, and (it would seem) must be unreasonably high. If the export price is lower than would be warranted by real effectiveness, the domestic price must be higher than is warranted by real effectiveness. If the export sales are at less than cost, domestic sales must be at more than cost.

This dilemma is most often stated, and most effectively stated, in cases where there is monopoly or something close to monopoly. Suppose that a single concern has control of a given product or set of products; it will often sell in one market at a cheaper rate than in another market. A glaring instance, laid bare by repeated public investigations, was that of the policy which the Standard Oil combination followed in its domestic transactions; it sold in some domestic markets at lower prices than in other domestic markets.

Now, if the price in the favored market was sufficient and reasonable, *ipso facto* the price in the non-favored market was more than reasonable. Similarly, if an export price is in itself sufficient and reasonable and in right accord with cost, then the domestic price, if greater, must necessarily be unreasonably high and in excess of cost. If, on the other hand, the lower price to foreigners is in itself not enough to cover costs, then the domestic price must in the long run cover the difference; the domestic price must be too high. And in this latter case the exports, if made at

prices which do not in the long run really cover costs, are based not upon real effectiveness of industry, but upon concealment of real cost, precisely as in the case of export bounties. The argument is that the practice either involves undue prices to the domestic consumer, or else a sham of effectiveness in producing the exported article, not real effectiveness.

Export Trade Not Necessarily Prosperity

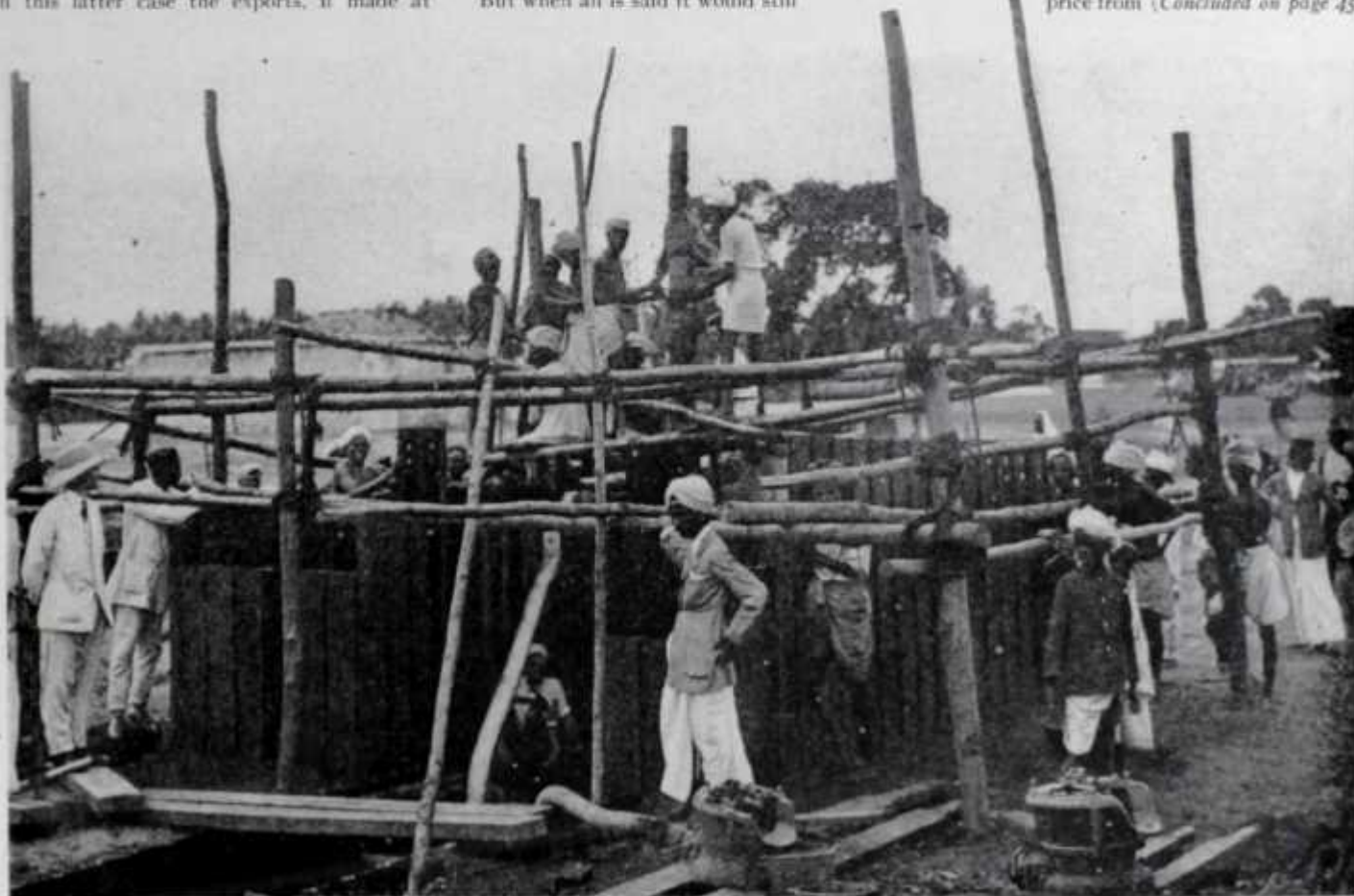
HERE again, as in the case of railway rates, this mode of dealing with the problem may not probe it to the bottom. If railway rates are highly complicated, some problems of price and of cost in relation to price are almost equally complicated in any large-scale industry. The situation is far from simple; it raises all the questions of fixed charges, of overhead expenses, of cost accounting and the allocation of costs, of business policies in the face of fluctuating demand, of the ways of meeting alternate cycles of activity and depression, of security and continuity in industrial operations. It raises, too, the question of the difference between a sporadic and a systematic application of special export prices. In the early stage of export trade, special allowances on exports may be part of an effective policy of merchandising. Practices of this kind tend to become less widely applied in the latter stage of fully developed and continuous export business. There are here unsettled questions not only of economic analysis, but also of sound business policy and of effective industrial leadership.

But when all is said it would still

seem that practices of this sort, namely, special rates upon export trade, must be on the defensive. It needs to be proved that they are really advantageous to the community. At first sight they appear to be disadvantageous,—to mean not real effectiveness of industry, but concealment of a cost or burden actually incurred in the export part of a business, yet borne not by that part but by the rest of the business or by the community at large.

And here once more let us not fall, as involuntarily we do, into the deceitful belief, or perhaps the flattering unctious, that the sending of goods abroad is in itself a thing which brings money into the country and thereby makes us all more prosperous. Let us hold fast to the fundamental principle that the exports are the means of producing the imports, and that only if there be real effectiveness, real success in the application of our labor and capital, does the country gain.

In all discussions of special export prices and of dumping, a distinction must be borne in mind between sporadic and permanent transactions,—between occasional sales at special prices and a permanent policy of lowered prices for export. No one questions that conditions may arise at times in any business venture which will compel the disposal of a block of commodities at any price they will fetch when thrown upon the market. These are not pleasant or welcome conditions, but they must be faced as sometimes inevitable. It is quite a different matter, however, to sell permanently and systematically one part of your output at a different price from (Concluded on page 45)



COURTESY OF U. S. BUREAU OF FOREIGN AND DOMESTIC COMMERCE

You sometimes hear arguments against trading with oriental countries where the mass of the people "can't purchase anything but the bare necessities of life." Here is an answer to it. These Indians may not be able to buy Elgin watches or Detroit automobiles, but in the aggregate they can pay for heavy steel and equipment for their public utilities

CONGRESS SPELLS IT W-A-R

And It Is Written With a Capital "W" Across Every Page of the Congressional Record of the Last Month

WAR decidedly stimulates examination of the legislative scheme of things. Congress now has to do a deal of scrutinizing in directions that are unexpected; for our legislation during several generations has proceeded upon the assumption that it would never have to meet the exigencies of war.

Immigration

EVEN immigration has its war aspects, wholly separate from the general decrease of immigrants of ordinary kinds from a million to an average of 300,000 persons a year. Many aliens who were lawfully in the United States have gone abroad to fight in our own army or in the forces of our co-belligerents. As our immigration laws stand these men could not return to the United States if they were crippled by wounds. On May 6 the House undertook to amend the immigration law in such a way as to allow all such men to return after honorable discharge or furlough from our own army and to permit any who had declared their intention to become citizens before war was declared against Germany and have served with co-belligerent forces to come back regardless of impediments in the law. If any of these men after returning to the United States become public charges, the expense of care and maintenance is to be met from the United States Treasury, and will not fall upon local communities. The State Department would go farther, and prevent obstacles against return of any men from the armies of co-belligerent countries, whether or not they have signified an intention to acquire citizenship.

Naturalization

REMOVAL of difficulties in the immigration laws is not considered sufficient. One hundred and twenty-five thousand aliens are now serving in our military forces, and there will soon be 300,000. Many of them are in France. Without American citizenship none of them can become an officer, no matter how completely he may earn promotion; while serving in our forces abroad, these men cannot even claim the protection that goes with American citizenship. Many of them have not filed declarations of intention to become citizens and if they should now take this step, and should be able to show five years of residence here, they would have to wait two years before they could file their petitions for naturalization; for it is this final step that transfers a man from the category of alien to the status of United States citizen.

Legislation to expedite citizenship for men in the armed forces became law on May 9. An alien in our army abroad or at home will be able to send a petition to the clerk of a naturalization court and obtain citizenship with expedition, without proving five years of residence in the United States, and without paying the usual fees.

What they will get without fee is in such great demand that a total of naturalization fees of \$65,000 in 1907 became \$635,000 in 1917, or almost twice the fees of 1913.

The new law deals with a number of other situations arising with respect to naturalization and aliens. It also affords opportunity to obtain citizenship for men who have served on American merchant vessels for three years, it validates the naturalization of 40,000 or more persons who by reason of a situation disclosed by the Supreme Court in January may find of no avail their citizenship papers granted during the last five years, and it affords the President discretion in dealing with persons who technically are now alien enemies. Hardships will be prevented for persons of German birth whose loyalty can be proved but who now are in a predicament; some of these persons have lived for as much as seventy years in states where they have been allowed to vote after making a declaration of intention to become citizens and without subsequently taking out naturalization papers; some men in this position fought in the Civil War; for the relief of these classes naturalization is made possible during the war despite their technical status as alien enemies. Altogether, this statute illustrates the importance citizenship has attained and the increased duties that are to fall upon officials dealing with naturalization; for they are to have much to do with questions of the loyalty of applicants for citizenship.

Foreign Travel

A PASSPORT is the accepted international evidence of nationality, but it has not been greatly esteemed by Americans except when they met regulations of foreign countries, such as the exactions of German police. Its importance will be borne in upon us, however, under a bill for which the State Department and the Department of Justice stand sponsors; for an American to enter or leave the United States without his passport will entail severe criminal penalties.

Complete control over entrance and departure of persons is the purpose of the bill. The law respecting trading with the enemy affects travel only of alien enemies. As a result, our officials have been hard put to it in dealing with some classes of persons entering and leaving the country. Import and export of goods are controlled. Now it is proposed to require a permit for every person,—citizen, neutral, or enemy,—to cross our borders. For a citizen a passport will operate as a permit. Of course, it is expected that regulations issued under the bill will prevent hardship along the Canadian border, but they may equally be expected to cause some difficulties on our southern boundary.

Anyone who has traveled abroad since 1914 knows how far other belligerent countries have gone in regulating travel across their borders; Germany at times completely closes her frontiers.

Sedition

IN January the House Committee on the Judiciary brought forward a bill which was intended to make it a criminal offense for anyone, by making false statements, to obstruct subscriptions to government bonds.

The bill was proposed as an amendment to the espionage act of last June, the consideration of which then aroused much debate over the freedom of the press.

The amendment of this year grew in its scope, until it became known as the sedition bill. It again led to much discussion, ending eventually on May 4, when the Senate passed the bill in its final form.

The protection of bond issues continues in the bill, but *bona fide* and not disloyal advice to an investor is expressly excepted from the prohibition against false statements intended to prevent the sale of government bonds.

The added portions of the measure are the more important. The following are punishable with heavy penalties:

Discouragement of recruiting or enlistment; Disloyal or contemptuous language regarding the federal government, the federal Constitution, the military or naval forces, the flag, or the uniform;

Language to encourage resistance to the government;

Language to promote the cause of an enemy country;

Wilful display of an enemy flag;

Incitement to curtailment of production as a means of hindering the country in waging war;

Advocacy, defense, or suggestion of any of the things prohibited.

Beyond these prohibitions stand not only the possibility of \$10,000 in fine and imprisonment for twenty years but also the machinery of the Post Office Department. Any writing or print which offends is outlawed, so far as the mails are concerned. Moreover, any person who is decided by the Postmaster General to be placing such things in the mails will be altogether isolated from the postal service; he will not be able to send letters or other communications through the mails nor will he be allowed to receive them from any other person. Every letter addressed to him will be returned to the sender with a superscription, "Mail to this address undeliverable under espionage act."

Unlawful Associations

ON May 6 the Senate dealt with another situation, regarding which there will soon be new legislation. The Senate passed a bill declaring unlawful, and subject to fine, any action during war on the part of an association to carry out its purposes if they are to bring about any governmental, social, industrial, or economic change by use of violence to persons or property, or threats of violence. Orators who preach such doctrines, persons who issue pamphlets, persons who knowingly rent rooms for meetings of associations of the interdicted kind, and persons who contribute toward these organizations all come under the provisions of the bill for criminal penalties.

Destruction of Property

ON April 20 a bill became law which is part of the legislative programme for remedying the situation of a year ago when, as the Attorney General in (Continued on page 32)

“And Some An Hundred Fold”

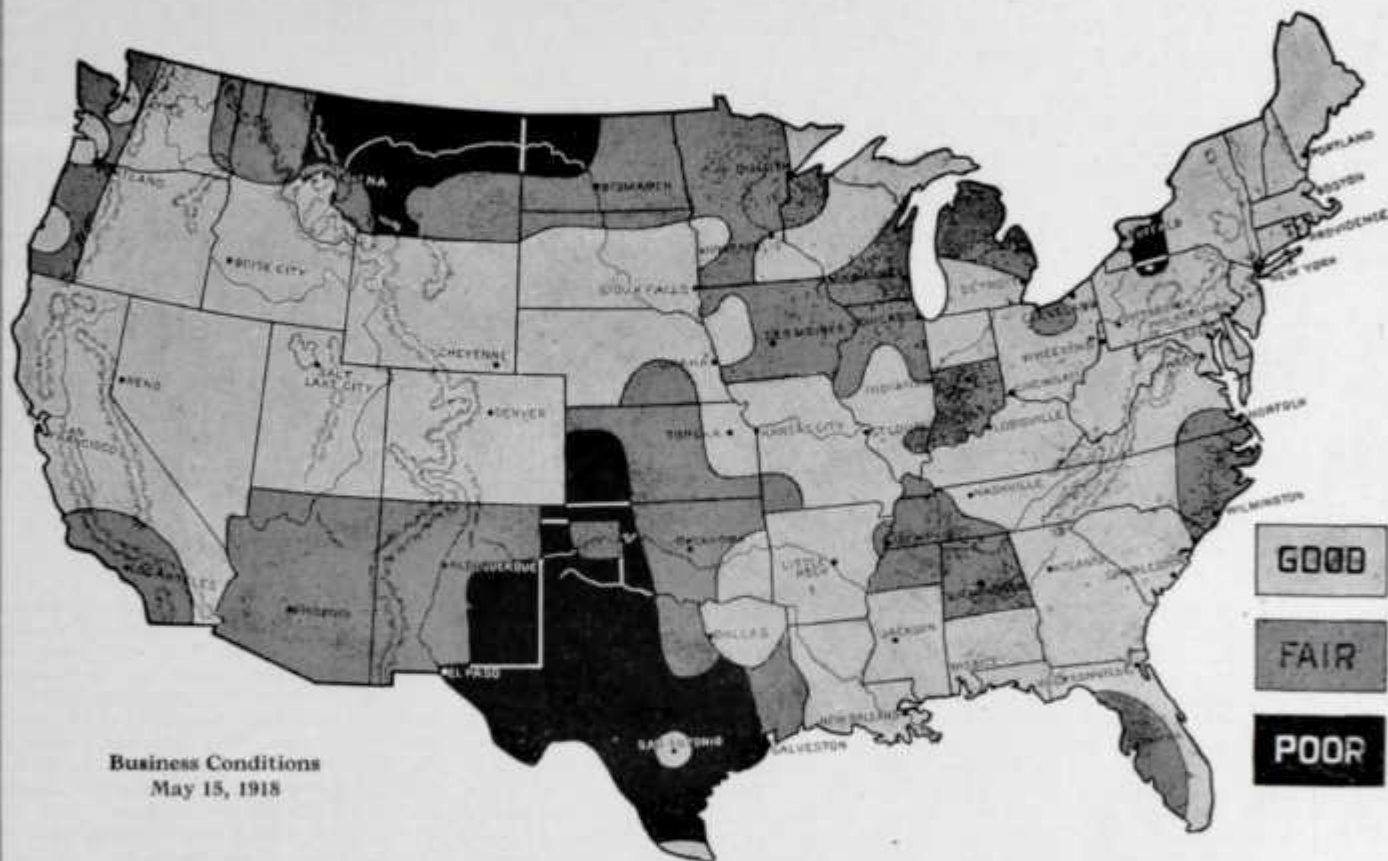
By ARCHER WALL DOUGLAS

IN the midst of war's alarms, an increasing array of social and economic problems which encompass the business world round about, and, in general, one thing after another, the prospect of the crops shines out like a little candle in a naughty world.

The outlook for winter wheat, upon which the whole civilized world hangs expectant, is for a yield of from 600 million to possibly 650 million bushels, or the most cheering prospect since the great crop of 1915. Nothing is ever certain about the crops until they are harvested and safely stored, but cutting of wheat has

which has gone into the ground under circumstances that usually presage abundant harvests. There are great acreages of rye, barley, and oats, but lessened planting of flax, and probably not so much corn acreage as last year, partly because in some sections good seed were not always available, and also that the profit to farmers this year promises to be rather in the small grains.

There will be a very large acreage of cotton, because of the high price of this staple. But crop diversification in the South has become a habit, and the old



already commenced in southern California and from now on proceeds steadily northward from California across to southern Georgia, at the old Israelitish rate of a day's journey of about 25 miles. The probable yield seems generally well distributed, save for bare spots of winter killing in western and northern central Kansas, and northwestern and southwestern Oklahoma, where the stricken fields have been plowed up and planted to oats and other grains. Spring wheat seeding is completed, with an unusually large acreage, and the plant is up and growing well under the most favorable conditions, especially that of abundant moisture in the subsoil. This is true now even of west and southwest Texas and eastern New Mexico, where the thirsty earth has drunk her fill.

Farm work has been delayed by the steady procession of moisture bearing lows from the faraway Pacific. But that is a small matter compared with the great planting of every agricultural production

order of one-crop agriculture in that section will soon be as extinct as the ancient Dodo and the superstition that the amount of money in circulation is the true measure of prices.

Sugar cane, corn, wheat and other small grains, peanuts, alfalfa, velvet and soy beans have increasing acreage devoted to them each year south of Mason and Dixon's line. Alabama and Mississippi are typical of this great change and are now shipping out livestock where formerly they imported packing-house products.

The outlook for fruit is generally very good, with the danger of a late frost and freeze now well past, save only that peaches are very spotted as to possible production, being very good in the South, very poor in the East, even worse in the central West, but better in the far West and the Pacific slope. Peaches are very sensitive to environment and climate, especially cold weather, and consequently have a most checkered

career and spend much time in trouble.

There are many early vegetables, and they are coming to market in vast quantities. The principal difficulty is delay in transit and consequent chances of loss by deterioration. Back-yard and empty-lot gardening is saner and less infected with hysteria than last year, and consequently more productive. It is another case of "how soon we are forgot."

In the mountain states where irrigation is the chief dependence of agriculture, abundant rains so far have compensated for the lack of snow-fall stored on the mountain heights.

Along with the present abundance of agricultural products in this country—all save wheat—comes the story of the great stores of wheat in Australia, New Zealand, Argentina, India, Union of South Africa, and India, all awaiting transportation to the countries of Europe. So long as this prevails and until the problem of transportation is solved by more ships, there will be constant need of conservation in this country. Meanwhile we continue to be affected with the hysterical cry of ignorance as to the danger of a food famine in this country and throughout the world because of a lack of realization that distribution and not production is at fault.

Last year in many sections of the West and far Northwest there were great crops of potatoes, much greater than usual, but for want of cars many of them have decayed, for storage capacity was lacking.

A little happening in agriculture, somewhat widespread, illustrates the awakened interest in sheep raising on farms as an integral and necessary part of farm life. Very few ewe lambs are coming to market, and the reason is that they are being distributed on farms for breeding purposes, which seems to indicate that sheep and bees have more advanced feminist ideas than the human race, for among them girl babies are of more value than boys.

The world of business is fast realizing that the natural laws of trade are not any longer to be reckoned upon as determining factors in war times. Price fixing supplants the operation of the law of supply and demand in a steadily increasing number of business activities. It is obvious, of course, that natural laws in trade and other phases of life cannot arbitrarily be interfered with or set aside without breeding complications and trouble. But it has not yet been generally recognized as equally obvious that war is likewise an abnormal and unnatural thing and has to be dealt with after its nature. Nevertheless, business as a rule accepts the situation cheerfully as a part of the programme which both seeks the public welfare and endeavors to compass the general purpose of bringing the war to a successful conclusion. So the ultimate consumer is having consideration shown him in quarters, which is something for which he has vainly yearned these many years.

Despite increasing demands in many lines

and consequent scarcity of commodities for domestic use, it is evident two factors must continue to ameliorate and relieve the situation. One is the great production in all lines, and the other the obvious impossibility of the Government making use of all this vast mass of material save in due process of time.

In all lines of employment the unrest and constant shifting of the personnel of labor make for a low percentage of productivity and efficiency. The consensus of opinion of sober thinking is that we stand upon the threshold of an economic era where new wine is being poured into old bottles.

Two happenings lately have not only heartened the entire country, but have exercised a profound and encouraging effect upon the business world. One is the pronounced success of the Third Liberty Loan, especially in the rural districts, which first went over the top. Those who know the farmer by personal contact were aware that such things as loans and investing in bonds were new experiences to his environment, but that when he was approached and appealed to in the terms of his own living that he would respond in kind, much the same as the rest of us. The other happening is the changed situation on the western front. Few now minimize the seriousness, nor have any illusions as to what lies before us. But quiet confidence has taken the place of serious concern, and business can thrive only on confidence.

The Woman in the Man's Job

Experiences of These Two Big Employers Will Help Anyone Who Is Thinking of Diluting His Forces with Feminine Labor

By GAYNE T. K. NORTON

WHEN talk of women entering industry was first heard, when editors filled their papers with "faked" pictures of women mending boilers, I asked three men who employ in the aggregate 12,450 workers their opinion on the matter. In each case I received the same answer: "A sufficient number of women cannot be found in any one locality, or brought to any one locality, who will have or develop sufficient skill or stick-to-it-iveness, or tolerance for plant conditions, to be of practical value or real assistance to the manufacturer."

On the basis of that statement I published an article. Recently, work on Liberty Loan Committee, National War Savings Committee, Y. M. C. A., and thrift promotion took me into the field. The wave of publicity had passed. Men had gone; production had been maintained. Women had been at work long enough to allow of accurate conclusions. The woman industrial worker is a reality and a success; she has proved that every American woman is a potential industrial worker and that our women have in them the stuff that has made women a vital part of the French, English and Canadian war machines.

Speaking From Experience

THE experiences of two employers, the Bush Terminal Company and the General Electric Company, are typical of what women are doing to maintain production in both shop and yard. They are valuable because they give proof that women can "carry on," they will induce more women to enter industry and

will show employers it pays to open shops to women.

At Bush Terminal within a week after the passage of the selective service law, women volunteers were called for. Bush Terminal did not go to the families of its male workers, or yet to committees or other plants for women workers. It called for women from its own army of 30,000 workers within the industrial city. It chose to test the endurance, capacity and ability of the mass rather than the class woman, of the stenographer, file clerk and telephone operator, rather than the wife and daughter of the mechanic. Bush Terminal believed that only in this way could the industrial worth of the average woman be gauged.

Stenographer, file clerk and "hello girl," volunteered, and with them volunteered executives' wives, to whom work had been unknown, and the wives of bookkeeper and foreman, who, perhaps, had once been behind glove or ribbon counter—all average women.

Draft and voluntary enlistment took hundreds of men from Bush City yet not one of the almost infinite ramifications of the complicated organization slowed down. Women in the cabs of electric and steam locomotives are keeping freight cars moving, and at the wheels of motor trucks are guiding a half dozen trailers. Other women are operating steam winches and cranes, "donkeys" and all sorts of mechanical loading machinery, inspecting and maintaining lighting and telephone and other community service facilities. Still others are loading cars and ships, packing

warehouses and cold storage rooms, and caring for details of transportation.

Bush Terminal will lose more men. For weeks women have been studying to replace them—learning from women how to perform tasks it was thought only men could perform up to a year ago. The women are conscientious and serious, always eager to do more than they are able to do; they are more cleanly and careful about their work than men, and have a greater respect for property than men, and they are thrifty in their work.

The Apprenticeship Cut

IN Bush Terminal practically every operation to be found in the yards of industrial shops is being performed by women. They leave a cleaner and more wholesome trail and influence than that of the careless, swearing and tobacco-spitting stevedore. Every protection is given them, though bracing on the railroad develops self-confidence as well as muscle. The health of every girl is improved; there have been practically no accidents; none have become "vulgar" through contact with rougher conditions. Men's wages are given and overalls have been adopted. Strict supervision is necessary, lest the girls attempt too much. The spirit which has made them efficient is expressed in the statement: "I'm helping my Uncle Sammie and his n phews for all I'm worth."

In speaking at the annual meeting of the American Society of Mechanical Engineers on the experiences of the General Electric Company with the women worker on all classes of machine work, Mr. John A. Upp

made this significant remark: "We have found women under proper conditions and with proper training almost, if not quite, the equal of men on work to which they have been assigned." This remark is most important when it is considered that it was made to a group of key-men, immediately interested in the employment of thousands of workers.

The strength and endurance women have shown and their aptitude in mastering detail have been unexpected. Mr. Upp says: "With only a short, intensive instruction many women are working at duties which we would only give to apprentices of two or three years' training."

It was the experience of this company that, as women are weaker than men, shorter, with a reach not as long and without the lifting ability, they require conveniences not required by men. This necessitated, in machine operations, a change of methods in handling work, and it was so arranged that women could not secure a load of more than 50 pounds, except where this was impossible. Stools and chairs were found necessary; and short rest periods increased efficiency. These experiences were by no means confined to the General Electric Company.

More than bare compliance with the laws governing the employment of women, rest rooms, hours of labor and so on, was found to be a good investment.

Mr. Upp gave some pointed hints on employing women. The character of the woman must be carefully considered and her references thoroughly investigated, as "one undesirable woman will frequently destroy the usefulness of a whole department." Each woman in a department must be acceptable to all the women in that department.

It has been the experience of all plants using women that women between 18 and 30 make the best producers. Marital relations make little difference except when employment of the mother causes children to suffer. Women whose male relatives have been mechanics do better in the plant than do women of the families of office men. In no case have marriages between employees of a plant become alarming in number.

Instruction should begin the morning the woman arrives at the plant; few should be employed at once; each must receive individual instruction. Women are easily discouraged; not more than two should be given an instructor at one time, and instructions must be often repeated. Close inspection of work done by women is necessary, for they are not natural mechanics. But once a woman learns, the quality of her work never varies. As women work by instruction, not, as a rule, having minds of a mechanical turn, it is most important that they be properly and completely instructed.

Women work best under male supervision. Segregation is desirable where possible. Women should quit a few minutes earlier than men. Men soon adjust themselves to changed conditions and trouble is

unlikely to follow, interruption and confusion do not seriously interfere. The entry of women into a shop does, according to the consensus of opinion, have rather the opposite effect and tones up the general morale.

Women must be taught to appreciate machinery and the safety factor. Their shop clothing is

and are more cleanly in their work than men; but the reason for reporting on time and working every working day has to be emphasized. When accustomed to strict rules women accept them with content, providing they are just, and more is accomplished than through loose regulation.

Neatness and cleanliness of shop, rest rooms, toilets and all parts of the plant with which women come into contact are essential. Wherever possible the machines at which women work should be painted and kept white. The temperament and environment—the psychology—of the industrial woman needs the same study as her physical limitations. In this connection uniformity of shop clothing and a strict enforcement of rules regarding its wear is important.

Trouble will be avoided if nationalities are mixed. Necessary and unnecessary fatigue must be studied closely. The way England has handled the wage question has worked satisfactorily; women should receive two-thirds the wage of men on the same work. When the work of man and woman is equal in quantity and quality the pay should be equal. On piece-work women should receive the same rate as men.

High wage and patriotism have prompted women to enter industry. It is exceedingly unlikely that their presence will ever prove embarrassing. Marriage will take from industry 4 per cent; lowered wage and the passing of the patriotic need, with the end of the war, will remove all, and probably more, than it will be desirable to have removed.

Women of high class are being attracted to industry—a much higher class than those who first entered, who delayed until the experiment had passed the publicity attracting stage. Accordingly the quality of workmanship has risen.

Lathes, milling machines and screw machines give women the most trouble, but in each case, when the operation is learned, their work equals the work of men. Light punch press work gives women no trouble; heavy punch presses are being handled most satisfactorily by women in many shops. With proper instruction women are highly efficient in assembly work, another "men only" job.

Women are doing surface grinding where an allowable error is less than one ten-thousandth of an inch. In gauging and inspecting they are deft and uniformly more successful than men. The biggest arms and cartridge company is using thousands of women on all shop operations not requiring a man's strength—milling, polishing, drilling, filing and inspecting. Their uniform is a net cap and apron.

College women are in engineering offices drafting. As a rule women do not qualify to set their machines, they need rigging hands and set-up men; but there are many exceptions. In one shop women are setting up their machines, grinding their own cutters, and rifling, giving a quality-quantity output as high as any man.



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When women began to take up labor that called for strength and stamina the papers blossomed out with photographs showing immaculate beauties draped in engaging poses about the machines they were supposed to be operating. It is evident that these women have been busy with a real housekeeping job about this engine and its roundhouse.

an important consideration. The General Electric Company solved this by explaining the governing conditions to their workers and asking their suggestions; 98 per cent of the women agreed immediately to the costume pictured.

Machinery Suited to the Worker

WOMEN, when properly clothed, do not make extra machine guards necessary. The mesh of wire guards should be made smaller and wherever possible guards should be placed further from moving parts. The General Electric Company found it difficult to teach women the difference between dull and sharp cutting tools. This condition does not seem general.

Many foremen agree that women are more attentive to their work, observe rules better

BARUCH

"Disinterested Advice" in the Chairman of the War Industries Board Becomes a Benevolent Business Dictator with Miracle-Working Powers

By JAMES B. MORROW

IT would not be precisely accurate to say that Bernard M. Baruch is the autocrat of American industry, of the coal that makes steam, of the ore that makes iron, of the iron that makes steel, of the steel with which are made locomotives and nails, cannon and shells.

An autocrat governs as he wills. In him the law begins and in him, having changed his mind, the law ends. There are benevolent despots and several other brands.

Strictly, keeping close to the definition of the word, Mr. Baruch is not an autocrat. Practically, however, he is an autocrat, or if he is not, he can be one, under power bestowed upon him by the President of the United States.

The use of language made here may be open to debate. It is hard to describe a situation that is startling, when understood, and that is without landmarks as a guide. No man ever in this country has had the authority that now, active or dormant, has its seat in the person of Bernard M. Baruch, himself.

Authority with respect to material things—for example, factories and mines. The President commands the army and the navy. He is the nation's chief in all matters of foreign diplomacy. Also he suggests laws and Congress writes them into the books. His hands are full. At this point Mr. Baruch appears as the director, the autocrat, in fact, of all other work.

The machinery of war, it can be said, is his to create and his to operate—not the guns on the battlefield, but the metal that is in the guns and the labor that digs it out of the earth and fashions it into weapons for use on land and ships.

It is Baruch who is called to the White House, who counsels with Secretary Baker and Secretary Daniels and who summons Hoover and Garfield and impires their differences. The industries of the nation, actually, are his to control so long as the war continues. If written language means the same as it reads, he is, next to the President, the most powerful man, theoretically, in the country. That he is the most powerful man, practically, can be seen in his daily meetings with members of the Cabinet, with generals and admirals and with such personages as Schwab, Stettinius, Hurley and Ryan.

Will he use his power courageously and decisively? Is he really an able man? The second inquiry was put to a high officer in the government who confers with him regularly.

"When you speak of able men," the officer said, "I think of such ponderous characters as Daniel Webster. Using the immortal Daniel as a standard, I would not say that Mr. Baruch is an able man. I would call in another adjective—alert, for instance, or ingenious."

"In his judgments, I would say, that he relies a great deal on his intuitions. Always he aims to do what is right and what is just. Anything that is right or just will receive his approval. We who meet with him have come to understand that his conduct is ruled by high principles."

"Is there any iron in his blood and bones?" the writer asked.

"I think there is. He has remarked in a rather jocular manner that one of his principle duties is to keep the hounds, as he calls them, away from the Treasury. He will make short work of the hounds but he will not kick them out of his office. They will go, nevertheless. What I mean is that he will do nothing violent but what he does will be sufficient."

Summoned Out of Wall Street

NATURALLY, I believe, he is conciliatory. Then it should be remembered, he is surrounded by men whom he profoundly respects. It is possible that their standing, which is high, may unconsciously, at times, lead him away from his own intuitions or convictions. You see, Mr. Baruch is a genuinely modest man."

Which, it can be added, is one of the characteristics of his race. No great American Jew is ever boastful. Men of Hebrew blood flourish wonderfully and are silent with respect to themselves. They own banks, railroads, mines, newspapers and factories and dominate some of the largest industries but they say little, except around the tables of their directories. They make no claims to superiority.

It was a great honor, personally, for Mr. Baruch to be summoned out of Wall Street by the President of the United States and given a conspicuous place in the war work of the government. It was a still higher honor to be promoted, on his merits, to the post he now holds.

But he is unchanged. His smile is as kindly, his manners as unhurried as before. Tall, six feet and more; slender, white-haired, although his age is but forty-eight; his features delicately cut, he goes and comes quietly, carrying with him invariably the atmosphere of distinction and repose.

Referring incidentally, before a committee of the House of Representatives, to his methods as a speculator he said: "I do not pay any attention to rumors but depend on the ticker and the newspapers."

A man, then, of facts, symptoms and deductions. A mathematical man, perhaps, looking at the problem as it is, the figures in front of him, and seeing no further than the answer, which may be worked out before the closing of the stock exchange that day, or the next day, or by the end of the week.

This is exercise with a microscope—under the hand. Whereas, Mr. Baruch now has need of a telescope to see the war to the end and all subsequent events. Industrially, Has he a picture in his mind of the days to come?

Of the millions of men returned from France and of the other millions who must forge pruning-hooks instead of the weapons of death? Crushing the Huns, therefore, is not enough. Rehabilitation, not of the barbarians but of civilization, must be taken up. Delicate work is necessary at this juncture, patient work and wise work if American business is to escape disaster.

There is testimony that Mr. Baruch has a habit of walking around the foundations of

things and of testing the qualities of the masonry and of the lime and sand in the mortar. "When the market is very weak," he told the committee of Congress, "I want to buy things which I believe in the most from their intrinsic standpoint; and when the market goes down I try to sell those things which I think will have the least intrinsic merit."

Asked his business he replied: "Investor and speculator." He admitted that he often sold with one hand and bought with the other—simultaneously—and that "I never get in at the bottom or out at the top."

Pressed with questions, he briefly drew the outlines of one of the many episodes, which, joined together, tell the story of his Wall Street experiences. He stood at the ticker reading the news. Europe was burning. America was watching the most horrible tragedy of the ages.

Von Bethmann-Holweg, speaking for the Huns, hinted at terms of peace. The market shot down. Peace meant a decline in commodity prices and a sweeping reduction in demand.

A Reader of Signs

BARUCH sold stocks. Then he waited at the news ticker. Lloyd George answered for Great Britain. Peace, at that stage, he declared, was unthinkable. Then he modified his defiance with a "but."

No one except Baruch caught the significance of that little conjunction of three letters. Stocks rebounded. The war would go on. Men bought. Baruch sold "just as tight and hard and fast as I could."

"That 'but' to his super-developed and well-disciplined mind," he explained to the listening lawmakers, "left the door open for peace."

The other speculators caught the meaning of the word when it was too late. And Baruch, commenting on their lack of perception, said that he was astonished. "They seemed," he said, "to look on it as an item of news more than anything else."

To Baruch that "but" was a guide-post to wealth. Again the market broke and he sold. He confessed, without boast, that his profits during that period of wild fluctuations were \$476,168.47.

When Mr. Baruch invested and speculated—a business that he abandoned on his coming to Washington—he maintained two tickers in his office, one for news bulletins and one for quotations. Telephone wires connected him with five or six active brokers on the floor of the stock exchange. He says that he bought his shares "outright."

As he dealt in thousands, where other men dealt in hundreds, his bank balances and credit must have been very large. Some inventories of his property bulk its value at \$20,000,000. Conservative estimates, equally as accurate, halve those figures. Whatever his wealth may be it is now invested in such a manner, so it is said, that it will cause him no embarrassment while performing his duties at Washington. He sold his seat in the New York Stock Exchange for \$58,000.

Undoubtedly, Mr. Baruch began opening his opportunity of getting into the war some six years ago. Woodrow Wilson was then Governor of New Jersey. William F. McCombs, born among the bayous of Arkansas, a Princeton man and a New York lawyer, young, imaginative and reformatory, said that the Democratic voters could nominate a candidate for President, if they were once aroused, notwithstanding the programme and trickery of the politicians.

These two men, Baruch and McCombs, were trustees of the College of the City of New York, where the former had graduated at the age of nineteen. Baruch, buying and selling, an idealist from 3 o'clock in the afternoon until 10 A. M. the next day, was impressed and then captivated by the sentimentalism of the buoyant McCombs.

About that time Colonel Edward M. House, of Texas, the boundary of which State touches a corner of Arkansas, was persuaded that dreams sometimes come true. So they toiled in company, McCombs, Baruch and House, and Mr. Wilson was nominated, and then elected, to the bringing about of which event Mr. Baruch has sworn on the witness stand that he cheerfully contributed \$50,000.

Wealthy, with no entangling alliances, politically or financially, in the market and out of it over night, ready to liquidate at any moment, Mr. Baruch became, through Colonel House, one of the trusted counselors of the administration in certain particulars. "Here," said the Colonel, getting into the White House through the garden gate, "is expert and disinterested advice." The same was said to McAdoo, over at the Treasury.

At first, after his call to the colors, Mr. Baruch had to do with metals. Steel shares and copper shares, in Wall Street, had been among his specialties. A wise dealer, he had also investigated the industries, the profits, present and prospective, the ore supplies, visible and invisible and so forth. He pleased the powers. Promotion followed. Such is the Baruch war story, as the writer sees and has discovered it.

To Tap New Supply Sources

THE warrant given to Mr. Baruch by the President, which instrument was signed and published, states what the duties of the War Industries Board "should be."

"May I" are the inseparable pair of urbane vocables with which Mr. Wilson begins many of his letters, telegrams, and other communications. It is said that he is reluctant to write "you must," or "you will," or "I shall."

A man of harsher quality would have stated that the functions of the board "are," and that is what the President meant when he wrote "should be." This exegesis of the words he wrote is necessary to a realization

Just out of college, a clerk in a broker's office, he studied law and accounting. He was a millionaire at the age of thirty, and now the machinery of war is his to create and to operate, with power second only to that of the president

of the power he conferred upon Mr. Baruch and his associates—but particularly upon Mr. Baruch—and of what he courteously directed them to do.

First, they were to create new facilities and disclose, if necessary, "the opening up of new or additional sources of supply."

Large Things Done in Big Fashion

ALL, of course, in the work of carrying on the war. New facilities or instrumentalities undoubtedly include mines, forests, mills, furnaces and factories. These to be created, which means to be opened or constructed, so as to afford additional sources of supply.

The check was signed at the White House and Mr. Baruch was licensed to write in the amount, which can be, now or at any time, a new powder works, a new sawmill or another copper mine. That is to say, the decision lies with Mr. Baruch—and his board. The details would be carried through by other men. "I advise" Mr. Baruch actually can declare and the command would pass down the line and be carried through.

Furthermore, the board, otherwise Mr. Baruch, may convert "existing facilities, where necessary, to new uses." Thus an automobile factory can be turned into a munition plant, under the power of requisition granted by Congress to the President and by him delegated to the War Industries Board, which, as has been said, is Mr. Baruch.

This principle of conversion is without limit in its operations, "where necessary," and, of course, when practicable. Mr. Baruch would not order that a cotton mill be transformed into a blast-furnace or a bakery into a brass foundry. Nevertheless, he can alter many of the features on the face of industry if he will.

It has been discovered, in Washington, that large things must not be done in a picayune fashion. The old abhorrence of centralization has almost become a passion in the opposite direction. Undreamed of acts are being done and approved every day. The heel of tyranny, that hobgoblin of the demagogue and the understudy of the tentacles of the ancient octopus, has ceased to terrify.

The war's teachings are more than military. Cherished doctrines have become nonsense or heresies. Party platitudes have lost some of their most appealing boards. A million dollars honestly at work, making dividends for American capital and giving wages to Americans in overalls, are no longer decried and the ten-cent piece, once the symbol of virtue and the call to arms, has found its proper place.

Having created new facilities

having opened additional sources of supply and having converted old facilities to new uses, a measureless task, Mr. Baruch is directed to advise "the several purchasing agencies of the government with regard to the prices to be paid." The language here quoted is again the President's.

Likewise "the functions of the board should be," again to quote from the charter issued to Mr. Baruch, "the determination, whenever necessary, of priorities of production and of delivery."

And finally, the duty of Mr. Baruch is "the making of purchases for the Allies"—their ammunition, fuel, food, clothing, shoes and everything else that they require in the war they are fighting with the barbarians.

Autocrat, then, is not an inappropriate term to use in connection with Mr. Baruch—and his board. He is bound by no definite formula. The rough outlines of the map were made by the President. Into the map Mr. Baruch is drawing mountains, locating rivers and valleys and marking villages and cities.

Of No Humdrum Family

THERE have been many Baruchs since the dawn of writing and of time. They are no humdrum family, going into the generations without color and coming out in dreary mediocrity. "Seekest thou great things for thyself?" Jeremiah, the prophet, asked the first Baruch of whom there is any record in history.

"Seek them not," Jeremiah added paternally, for he was addressing his friend, follower and private secretary.

Since then, which was a day somewhere between 629 and 580 B. C., men

bearing the name of Baruch have been philosophers in Italy, rabbis in Germany, physicians in Russia, editors in Turkey, merchants in France, authors in Austria and financiers in Poland.

Simon, the father of Ber-

nard, was a native of Prussia. He settled in South Carolina, where the son was born. A surgeon in the Con-

(Concluded on page 44)





E Pluribus Unum

UNION in purpose and effort is the fundamental principle of our institutions. When we face inward, we may have our little differences among ourselves, but when we turn outward and confront a common enemy, we are not forty-eight sovereign states, nor manufacturers, nor employees, nor cotton-growers, nor bankers, nor lumbermen; we are the United States of America!

Our history represents a great experiment. We have been testing the question whether or not a set of principles could unite in a supreme effort peoples of divergent traditions.

Even our friends have been skeptical. Our enemies have confidently counted upon our failure. Their dismay is proportioned to our success; for we have turned to the world of affairs beyond our borders and presented ourselves as a nation intent upon a purpose as high as any people ever pursued.

The test has been met. The measure of our success alone remains to be determined. That measure is to be diminished by no individual and no group of individuals. In our internal affairs there will be error and mistake, because of the inherent limitations of human ability. But any individual attempt at conscious diminution of our full success is doomed to extinction in the wrath of a nation that has been aroused to defend its principles as its birthright. Moral fiber is demanded of every citizen, and there are no exceptions.

Combinations which We Welcome

EXECUTIVES are one of the new forms of international office which the war has brought. A controller or an administrator concerns himself with the problems in his own country, but an executive is international. Incidentally, it is composite and seems to be neuter in gender, regardless of the undoubted masculinity of its component parts.

Even an executive is not supreme in the international domain. The Inter-Ally Council on War Purchases and Finance is its superior. This council acts for Italy, France, and England in presenting to the United States a consolidated account of their needs in foodstuffs and the finance and tonnage that will make delivery possible. In other words, this is a form of combination among the foreign buyers of our products which we cordially welcome, despite the dislike we have had in normal times for private combinations of foreign buyers of our materials.

The executives come under the council; they supply the "over-head" machinery for execution of the council's decisions. The Inter-Ally Meat and Fats Executive, which has its headquarters in London, has a British member, a French member, and an Italian member. It collects the monthly requirements of the three countries, matches up the supplies available in the markets, decides what portion each

country is to obtain, and cables instructions accordingly to the Allied Provision Export Commission, in New York.

This commission likewise has a member from each of the three countries. It is the sole agency through which the three governments proceed in buying in America any foodstuffs except cereals and sugar, for which there is separate provision. Upon receiving instructions the commission first obtains the Food Administration's approval, in order that it may not upset any of our own kettles of fish. Each member of the commission proceeds, then, to make contracts for his own government.

If meats are involved, however, the commission passes on its orders to an American body which is charged with determining prices and with coordinating all purchases of this sort, our government's requirements as well as the needs of the Allies, and which places its allotments before the packers' committee, which distributes the quantities among the packing houses. A packing house which accepts its allotment then makes a tender to the appropriate allied government, and the formal contracts are negotiated between the packing house and the ally's representative on the commission in New York.

Military affairs, naval policy, and food supply are the three subjects of such para-

mount importance as to have led to the formation of inter-allied councils that control may be exercised in the common interest of all the nations that face the central powers. There are three offensives,—the offensive of artillery and infantry, the naval offensive, and the food offensive. In all of these three directions there is a pooling of resources.

The transactions of an executive run into large figures. In 1917 the Wheat Executive, constituted like the executive for meats and fats and, like it, acting under the council, made purchases in various parts of the world to a value of \$2,000,000,000.

Set Your Own Price, Provided—

RESALE prices and their maintenance have occupied no small part of business attention. Interest became acute in 1913, when the Supreme Court held that the existing patent law does not authorize a manufacturer to set the price at which a retailer may sell the patented article.

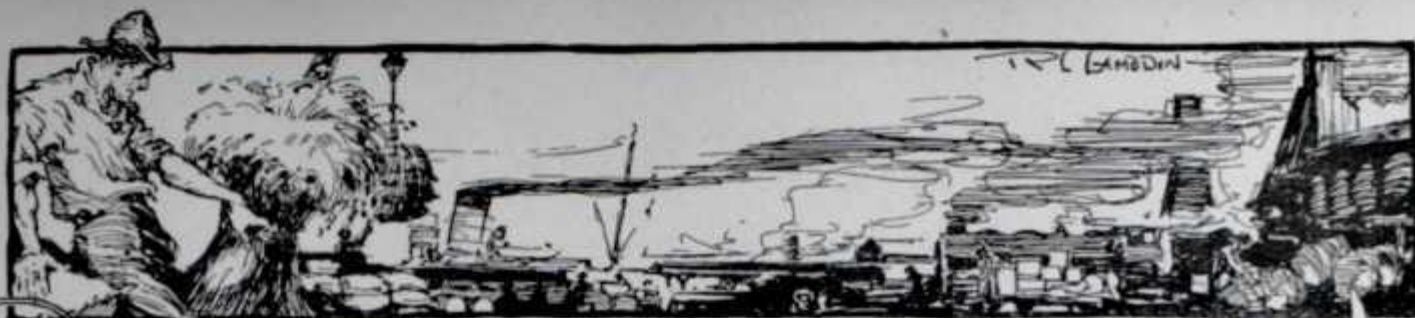
The Bureau of Corporations then undertook to study the economic principles which might make affirmative legislation desirable. Its studies were taken over by its successor, the Federal Trade Commission. Last autumn the Commission invited opinions from all persons who are interested, and it subsequently inaugurated proceedings to determine whether or not maintenance of resale prices is an unfair method of competition in interstate commerce.

On May 3 the Commission announced that in its opinion, as the decisions of the Supreme Court now stand, a manufacturer cannot refuse to sell to a retailer or other distributor

Why Stick at a Name?

THE old adage about a dog with a bad name appears to apply to fish. The wolf fish, deprived of his head and his name, affords meat that is whiter than halibut, flaky and delicious. The goosefish, when his ugly head is removed, turns out to have a tail piece of solid and tasteful flesh. Even the pestiferous skate offers a good dish in his wings.

The crayfish promises the most novel opportunity of all. It is not only a delicacy in itself but produces two small, half-inch, calcareous bodies, which are used as medicine in Japan and China, and realize high prices.



unless the latter agrees to maintain a resale price fixed by the seller.

This does not mean, however, that the retailer can altogether disregard the seller's rights. The Commission takes the position that when an article has passed from the maker to the retailer, the retailer has ownership and can sell at any price he likes, but with the important limitation that he cannot sell below the cost to him and thus enter into unfair competition with other retailers who sell the same article.

The Commission's decision does not end the matter, but contemplates the possibility of legislation by Congress. On this point the Commission says, "It may be that resale prices can be regulated by placing the power somewhere protecting against unfair prices as to make it work equitably, and be a fair method of competition in commerce."

The British Merchant Speaks His Mind

THE British merchant has contributed largely toward empire-building. He has been an international dealer and a power to be reckoned with around the world. Under the various controls the British government has instituted, merchants have experienced increasing difficulties, and when the government last autumn outlined a policy for continuance of control for three years after the war they protested vigorously. The wool merchants, for instance, declared the government had already taken away their business as importers and was in process of doing away with their export trade.

Government dealing with matters affecting trade arises in England in connection with eighteen different departments, some of which have advisory committees of traders and some have not. This situation led to a report in November by the Commercial Committee of the House of Commons.

Government control has not, according to this report, in all cases effected continuity and sufficiency of supplies nor conducted to distribution at reasonable prices. Maintenance of the organization of import merchants was declared to be as important as stimulation of home production. Cooperation between the government and the trades under control was said to be capable of considerable extension and certainly to be preferable to setting aside trained business men and substituting bureaucratic management, even when assisted by advisory committees the appointment of which generally has been grudgingly conceded by the departments and has not always been upon nomination from the trades themselves. In general, the committee took the position that any attempt to eliminate the merchant and the employment of his capital, experience, and technical knowledge in commercial undertakings would bring disaster to the commercial prestige of the country.

If the British merchant's special hardships continue, it will not be through lack of vigorous presentation of their case.

Another Cause of Nervousness

AMALGAMATION in the banking world is causing a stir on both sides of the battle front. Combination is so characteristic of industry and commerce in Germany that its occurrence among banks there causes no great surprise. Four successive amalgamations of British banks, each involving progressively larger deposits, with a climax in combined deposits of \$1,380,000,000, upset the equanimity of a portion of the public in England, and a government committee is considering whether or not the marshalling of banking resources to meet future economic situations is being overdone. Meanwhile, the idea of amalgamation has spread to Canada.

Absorption of one bank by another means a great deal more in England or Canada than it means in the United States, because of the British system of branch-banking. Canada has but 19 banks, but these have over 3,000 branches, of which upwards of seventy are in the western hemisphere to the south of us.

Slowing Down After Speeding Up

OVER-PRODUCTION may cause some real problems when the war ends. One of these coming difficulties has been contemplated by a committee appointed by the British government to consider the situation caused by the new sulphuric acid plants of the Munitions Ministry.

The war has caused such a development in England of the making of sulphuric acid that the product will exceed the country's consumption in times of peace. Increased use in manufacture of fertilizers, and compulsion as a means of getting British farmers to improve their land by applying fertilizer, will take care of only a part of the excess. In order to care for the balance a co-operative committee of acid-makers is under consideration. This committee would designate plants that are to be dismantled and those which are to be closed temporarily. In one case owners would be compensated by the government and in the other would receive interest on the investment.

Making of acid in the course of smelting zinc ores has caused part of the excess development. Before the war zinc-smelting plants exceeded the world's requirements and there was a spelter convention which controlled output of three groups,—associated German and Belgian smelters, certain Belgian and French producers, and British producers. When the stocks reached 50,000 tons or the London price fell for two months below £22 a ton, restriction of output occurred, under the convention. In those days, the British Empire's most important source of zinc ore, Broken Hill in New South Wales, was under contract to sell to German smelters, and Germany marketed a quarter of the world's supply of zinc, as a "producer" following closely the United States.

The war upset the Australian-Ger- (Continued on page 38)

Gentlemen of Leisure Obsolete

LOAFERS, whether of high or low degree, are being made legitimate prey for the sheriff. West Virginia, Maryland, New Jersey and New York have new laws under which able-bodied men have to prove that they labor usefully, at least to the very endurable extent of thirty-six hours a week; in default of regular occupation they go to jail.

In April Canada followed suit. An order in council issued which applies to the whole dominion, and requires useful occupation for every male person between the ages of sixteen and sixty.

THE NIGGER IN THE COAL PILE

Full Steam Ahead for American Industry on One-Fourth Less Fuel Not Only a Possibility, It May Become a Necessity

By ROBERT JUNE

THE big industries of the country have made a discovery. They have learned that the profits of today depend very largely upon the economies that can be effected in production, and that the profits of tomorrow will perhaps depend entirely upon such economies. The recognition of this fact has come tardily to many, but now that they are "seized with the spirit," they are pursuing savings in every direction.

That is one reason why Big Business is as big as it is, why some of the big fellows are absorbing the little ones.

It would not be correct to say, however, that big industries are uniformly economical in regard to the operation of their power plants. Many of them are extremely wasteful. With every incentive to scrutinize power cost, and to put their power plants on the same efficient basis as other producing departments of their factories, they have failed to exercise business-like supervision over their boiler rooms.

As a general proposition, the manufacturer has been so busy with sales problems, and getting volume of production, that he has neglected one of the most important elements of profitable operation. He has wasted 25 per cent of his fuel, largely because he has regarded his boiler room as a place of mystery, the chief function of which was to consume coal in endless quantities.

He has given his fireman an unlimited supply of coal and told him to "go to it." So long as the fireman has kept steam up, nothing has been said. The fireman on his part has considered that he has performed his full duty in keeping the pressure gauge at 150 pounds. That was what he was hired for. Nothing was said, when he was engaged, about the quantity of coal he was to burn to keep the gauge at that mark. Coal, to him, has been a heavy black substance requiring a great deal of handling—nothing more.

The boss has seen to it that it was delivered in whatever quantities he, the fireman, required, and the boss has paid for it,—so why worry?

The United States Bureau of Mines has been for a number of years engaged in obtaining and disseminating scientific information regarding the mining and consumption of coal, and the results of its work have been of great value to technical engineers.

Six hundred million tons of coal were mined in the United States last year. It is predicted that 700,000,000 tons will be mined this year. Next year's production will likely be still greater. Of this quantity, approximately 37 per cent, or 259,000,000 tons, will be burned in the production of steam in industrial plants.

I have said that 25 per cent of all coal so burned in the past has been wasted. It is no secret!

David Moffat Myers knew it when he read

his paper, "Preventable Waste of Coal in the United States," at the annual meeting of the American Society of Mechanical Engineers in New York last December. Walter N. Polakoff knew it in April of last year when he brought out the impending danger of a coal famine in a series of articles in the technical magazines. Joseph W. Hays knew it five years ago when he addressed to power plant operators his little brochure, "How to Build Up Furnace Efficiency." And scores of our ablest consulting and mechanical engineers, men of the type of John A. Stevens, who devoted years to the perfection of the American uniform boiler code; Charles Thomas Main, president of the American Society of Mechanical Engineers; Thomas L. Tomlinson of Syracuse; C. W. E. Clarke of Stone and Webster; Frank R. Ford of Ford, Bacon and Davis; E. J. Buegler of Westinghouse, Church, Kerr Company; A. W. Nisbet of the General Electric Company, and Charles S. Turner of the Ford Motor Company, knew it and have known it for years.

Each of these men has been successful in building up the operating efficiency of the plants with which he has been associated. He knows what can be accomplished. He knows that the results attained in his plant could be attained in hundreds of others. It is one of the outstanding wonders in the history of the

permitted to continue year after year through failure of the business executive to heed the recommendations of his consulting engineer.

The preventable waste of fuel in the boiler furnace of one steel mill recently investigated amounted to 40,000 tons per year, which at \$5 a ton would cost \$200,000. This was a



comparatively modern plant. The efficiency of boilers and furnaces in a 14-day test was 55 per cent. The load factor was unusually favorable to high efficiency and could readily be raised to 70 per cent

or over. This is only one example, and there are many more extreme cases. In one hand-fired plant the evaporation was raised from 6 to 9 pounds of water per pound of coal in a few days of instruction and continuously kept close to this higher mark with the help

development of industry in America that a waste running into hundreds of millions of dollars annually should have been carelessly

of coal and water measurements which were inaugurated. The saving was due exclusively to instruction and consequent better operation.

Dollars in the Coal Pile

ANOTHER large concern, internationally famous, operates several good-sized plants that burn as much as 50,000 tons of coal a year. An elaborate bookkeeping system is in use, and petty expenses are kept down to a minimum. The same policy is carried out in regard to the wages paid engineers and firemen. Although other costs of manufactured production are regulated with scientific precision, but little attention is paid to the cost of the steam generated. The engineers are kept busy outside the boiler rooms. The master mechanic has a test made once in a while. If the evaporation does not come up to expectation, the fault is laid to adverse running conditions and let go at that. A general increase of at least two pounds of evaporation per pound of coal could probably be effected in the plants of this concern, which would mean at least \$25,000 saved every year—many times what it would cost to equip the different plants with necessary apparatus and pay the salary of a competent combustion engineer to look after their operation.

In a small Pennsylvania town there are two factories manufacturing the same class of product. The smaller of the two plants burns eighteen tons of coal a day, the larger five.

In a western city are two cold storage plants. One gets three units of refrigeration from a ton of coal, and the other gets ten. The proprietor of the 10-unit plant is growing rich and buying more plants. Some day he will buy the 3-unit plant and put it on a 10-unit basis.

In Cleveland, the management of a large plant, facing sharp competition, came to a realization of the fact that every dollar in the coal pile has to be skinned from the dividend pile, and began to take thought of its boiler room. Such things have happened before, but in this instance the thought was followed by action. The furnaces were put in proper condition, provision was made for regular cleaning and close supervision, and the firemen were placed on a bonus system. Less than \$4000 was expended in making the change. During the preceding year, coal had cost this company \$164,000. In spite of increased coal prices and increased production, the saving effected the first year amounted to \$46,000, and the company declared its first 10 per cent dividend.

Then there is the case of the Tennessee Copper Company. By redesigning its furnaces—adapting them to the fuel used—and substituting machine-fired grates, the company succeeded in obtaining the same amount of steam with but 64 per cent of the coal formerly used. This plant, when completed, was turned back to the same management that it had before, with no further instructions. There were installed facilities for continuously determining the weight of the coal, ash and water used as well as the analysis of the furnace gases.

In another large industrial plant a similar saving in coal was effected. This plant has an aggregate capacity of over 7000 nominal boiler horsepower, divided into 22 units. It was formerly operated with hand-fired shaking

grates for which machine-fired grates were substituted with properly designed furnaces. The plant is now being operated continuously at a 150 per cent rating and is using no more fuel than it formerly did when operated at two-thirds of its present output. The boiler-room force required to operate this altered plant is less than half of the number of men formerly employed.

Coal has been placed under the supervision of the Government in order more nearly to meet the crying needs of the country, to use the railroad facilities more efficiently so that the coal shortage may be minimized, and to apportion the coal in quantities and to uses deemed most expedient.

While this organized effort to bring about

THE United States Fuel Administration has announced the appointment of an administrative engineer for the Pittsburgh district as a preliminary step toward putting into operation a general plan for fuel conservation in power plants.

The plan contemplates the saving of from ten to twenty per cent—25,000,000 to 50,000,000 tons—of the coal used annually in industrial plants. This will be accomplished by means of correct operating methods without the delay and expense involved in the installation of new or improved equipment.

The program is at present in effect in the Pittsburgh district, and will be used as a model, with the exception that the campaign for the elimination of waste will be extended to all of the principal coal using districts.

The program comprises certain fundamentals:

1. Personal inspection of every power plant.
2. Classification and rating of every power plant based upon the thoroughness with which the owner conforms to recommendations of the United States Fuel Administration, involving the generation and use of power, heat and light.
3. An administrative engineer to be placed in charge of the work in each state or district. It will be one of his duties to rate the plants from information received through reports of inspectors, who will collect certain definite information regarding each plant.

efficiency in the production and distribution of coal is being made, no parallel measures have been adopted looking to efficiency in its use. The hundreds of large plants which are consuming fuel wastefully, in many cases more wastefully and carelessly than ever before, are directly and needlessly causing a large fraction of the existing car shortage.

The saving or wasting of 25 per cent of the coal consumption of any industrial plant depends entirely upon the efficiency of its operating management. This percentage of saving relates exclusively to the boiler plant, to the production of steam, and does not include the large economies possible in connection with its distribution and use.

I refer to the boiler plant in particular because it offers the most lucrative field for producing economies, and these with a minimum of alteration in physical equipment.

Each According to His Deserts

UNDER present conditions, a plant which carelessly operates at an efficiency of 40 to 50 per cent receives from the Government the same consideration in the delivery of coal as the one whose efficiency is 70 to 75 per cent. An awakened America will certainly not permit such a condition entailing a needless waste of 60,000,000 tons of coal a year, to continue.

Power is one of the largest items of expense in most manufacturing businesses, and the cost of fuel represents on the average 70 per cent of the cost of power. And the cost of fuel is going up. Nothing short of the dis-

covery of a new source of power can stop the rising tendency of coal prices.

In 1850 our annual coal consumption was 300 pounds per capita. By 1870 it had jumped to 2000 pounds, and twenty years later it was 5000 pounds. In 1917 approximately six tons of coal were mined for every man, woman and child in the United States. And this was not enough. Our war machine demands, for 1918, a production equal to seven tons per capita.

Will we get it? We may and we may not.

One thing is certain—coal must be saved. The power user is confronted by a condition, not a theory. It isn't a question of whether or not he will burn fuel economically. He will burn it that way or not at all. The only

latitude he has at present lies in the question "When?" and the rope is getting shorter every day.

The time is coming when the conservation of fuel will be rightfully and generally conceded to be a public, national concern, and the use and waste of fuel subject to regulation. Almost inevitably a state or national commission will require from users a strict accounting of their stewardship of the B. T. U. entrusted to them from the nation's great storehouse. They will be required to answer whether two, five or ten times the necessary amount is being used. The individual consumer may be satisfied or choose to waste, but the public will take the broader view that with waste the cost of fuel is made proportionately greater, more burdensome, to others.

The Day of the Highway

HIGHWAY transportation is being extended in the United States and in many districts complete utilization of motor trucks that make interurban journeys is being sought through return-load bureaus.

Great Britain has a national road-transport bureau composed of representatives of such departments as the War Office, the Ministry of Munitions, and the Controller of Horse Transport. It works with a central advisory committee of manufacturers, officers of a federation of commercial road-transport associations, and the association of chambers of commerce. The country is divided into thirteen districts, with a divisional board in each, and these districts are further apportioned into 100 areas which have committees of their own.

In each area there will be registration of all vehicles with a load capacity of a ton or more, whether they are motor-driven or horse-drawn, and a scheme of priorities is being prepared, in order that in emergencies vehicles hauling goods of a low class may be employed for articles of greater importance. Each vehicle will at all times have to be at the disposal of the transport committee.

These plans illustrate the importance of highways to England at a time when railroad shops, instead of caring for repairs of which British railways stand in such need that the speed of trains is being decreased on account of worn rails, have built gun carriages, renovated by the million brass cartridge cases for rapid-fire guns, manufactured fuses, and turned to other work which the Railway War Manufacturers Committee has found immediately essential for military purposes.

THE ENEMY'S PLANS FOR PEACE

An Illuminating Disclosure of the Strategy American Business Must Face When the Hun Starts the Drive for His Lost Trade

By VERNON KELLOGG

Of the United States Food Administration

AN interesting kind of writing is finding its way more and more abundantly into German newspapers and financial and trade journals. It is also appearing increasingly in the form of separately issued brochures and pamphlets, with the familiar brown-yellow paper covers so characteristic of the semi-popular technical and scientific publications of the German printing houses. The subject of this new literature is the probable condition of German export industry and commerce immediately after the war, the necessity of their swift rehabilitation, and the best ways to effect this rehabilitation. The Germans are seeing the handwriting on the wall.

One of these writers, a German industrial engineer of note, indicates the situation as follows: "The war has created conditions and will be followed by circumstances which will shape and determine Germany's export trade in the future. These conditions must now be taken into account and suitable measures adopted in preparation. New trails will have to be blazed if we are to overcome the obstacles ahead. An enormous task worthy of the German people is to be performed." And he then proceeds, to the extent of twenty or twenty-five thousand words, to enumerate the specific obstacles, to outline in detail the enormous task—the very enormity of which makes it so attractive to such a super-people as the Germans—and finally to indicate the manner of construction and the direction of these new trails that are to be blazed. I may say at once that they all reveal a most suggestive deviousness of approach to their goal. They are a tricky lot of trails.

First a word as to the obstacles and the conditions that make the task an enormous one.

For the Sake of the German Pocket

IF the world did not fully appreciate it before, our mentor points out, the war has revealed in all its glory "Germany's genius in industry." Hence precisely because this genius is so terribly mighty, "hostile ingenuity in the future will direct itself before all else toward undermining this mighty bulwark of the German pile."

"For peace will come, yet hate will remain in the hearts of those who have conjured up this bloody struggle, and who are inferior in it, morally, physically, and economically." And these pitiable inferiors will do their little worst to undermine German industry by attacking, even at the expense of their own personal discomfort, Germany's export trade; for that is in some measure exposed to their blows. Driven by their despicable hate, they may go to the extent of stopping all purchases of German supplies, "by denying themselves, at least for the time being, even the most indispensable articles." And if finally they must have such articles, they will order what they must have, "even perhaps at ruinous prices, from any other producer except the German."

So the Germans must do a bit of *camouflage*. "To overlook the self-love of another is always difficult, for self-love is egotistic."

How the German, from the All-Highest down, does revel in the platitudinous. "To avoid offending the self-love of hate, the greatest in the world, is a colossal task, yet it must and assuredly will be performed, for what must be done the Germans can do."

Our keen-eyed guide and hard-headed adviser has thus effectively stimulated his absorbed readers to take proper delight in his later revelation of how the simple Gallic and Anglo-Saxon fools can be neatly tricked by the clever *camouflage* of the patriotic German, who is willing to cover up his real feeling for the sake of the national glory—and his own pocket. In fact, our author has used a little smoke between himself and those of his readers who might be a little less adaptable than he.

As to Treaty Values

HE now declares at once that the stock solution of the militarists for the impending post-war difficulties of the German industrial export trade, namely, that they will all be settled satisfactorily by the "future treaty of peace and by the commercial treaty then dictated"—by the Germans, of course,—is an easy answer, but a false solution, "even apart from the fact that the par value of treaties has reached nil and will not immediately recover from its slump, using this word in both a material and ethical sense." In the *argot* of the street, one must exclaim, "Well, what do you know about that?"

Again, as to treaties, he quotes some enlightening German modern philosopher as follows: "He who would keep treaties does not need them, he who chances them—takes his chances." This is certainly refreshing frankness.

The militarist solution is a false one because even the most properly dictated commercial treaty is of no value if the chauvinistic prospective buyer will buy nothing marked "Made in Germany." No, this blunt, military way cannot be relied on. "Commerce which is supported at the point of the bayonet cannot be maintained permanently; it is in its essence unsound." And this from the land of the bayonet *über Alles!*

But there are other ways. First, perhaps, to be considered are "economic compensations." These are dangerous things to play with, but the situation is going to demand a drastic game. Economic compensations are not going to mean necessarily a state tutelage or state guardianship of exports industry, but a "state protection, which shall take care to see that what has been sown on domestic soil shall be reaped on domestic soil. . . . This protection will extend not only to the material with which industry works and to the intelligence which devised its processes, but also to the proprietor of the materials and to the brain-worker and hand laborer. It is clear also that coercion must be used where benevolent protection is not sufficient; for the transplanting of domestic industries which were hitherto beyond the grasp of foreign countries must be prevented for the general good, even if private interests suffer on that account."

What all this means is that internationalism in science, technology, and industrial improve-

ment must be suppressed. There must be an absolute end to any transfer of valuable industries to foreign countries. Germans must not establish branches of their industries in foreign lands.

But this makes other difficulties possible. Just as the hating inferiors cannot be compelled to buy German made articles, so also they cannot be compelled to send the needed raw materials for these kept-at-home industries to work with. "It must be admitted that Germany's export trade, at least in certain products can be stopped if the procuring of raw materials is rendered difficult or cut off entirely." Hence, associations which can, under some sort of cover, arrange to get hold of foreign raw materials must be gotten well under way in advance.

However, even with the raw materials difficulty taken care of "the export trade may be embarrassed and impeded also by the fact that its goods are of German origin, and bear the German trade-mark, and that the manufacturer is located in Germany and ships from there."

"All these obstacles can perhaps be removed, but the most difficult are those through which the German character of the export product is visibly and immediately recognized by foreigners in general. Let there be no misunderstanding on this point: German goods can never belie their origin to the export user, because an ineradicable stamp has been impressed upon them by their two chief peculiarities,—care in manufacture, and complete fitness, economically, for the use to which they are to be put." This stamp is an automatic result of the manufacturing process and sets them well above the products of foreign competitors in spite of similarity in other respects. The far-sighted manufacturer does not, of course, content himself with the advertisement thus afforded, since it reaches only the man who already uses the goods. He endeavors to make his goods known to a broader circle through special means—propaganda—in order to win more customers. The usual way of accomplishing this is to call attention to the name of the firm, its location, and its trade-mark. Such advertising so far as can be judged to-day, will have anything but a commendatory effect among the formerly hostile nations, at least for a considerable time after the conclusion of peace. The mere fact that the goods were shipped from Germany will be a drawback if it is made known.

Dropping the Made-in-Germany Stamp

WE shall, of course, cease to give conspicuousness to the German character of export products; judging, however, by various indications in hostile newspapers, we must reckon upon the use of apparently harmless, but actually malicious tricks, to discriminate against German goods. For instance, foreign customs officers may stamp upon them the country of their origin, etc. The purpose is easy to discover. Even if the first man to receive the goods, for instance, the wholesaler, wishes for evident reasons to conceal the place of origin from his chauvinistic customers, that is to be made (Concluded on page 36)



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Heads, bodies, arms—assembled by German women before the war for the little girls of the world to play with. These same women probably are at present making munitions to shatter the heads, bodies, arms of Americans. The small sisters and daughters of our soldiers now delight themselves with dolls that are natives of the United States. It is not likely that the German product will be kindly received when the attempt is made to rebuild the gentle industry which the killer Prussian has destroyed

Why Cities Grow— and Grow Famous

Following Lines of Scientific Development, Towns Become Industrial Specialists, and Build Manufacturing Efficiency as Well as Furniture, Shoes and Automobiles

By CARL HUNT

HAVE you ever seen the rubber trees just outside the limits of the city of Akron or the mahogany forests at Grand Rapids?

There are none? Then why has Akron become noted for rubber products and Grand Rapids for furniture? Why is Detroit the automobile center? Why did St. Louis forge ahead, in such remarkable fashion, a few years ago, as a shoe manufacturing city?

A few years ago, half a dozen cities of about the size and importance of Detroit might as reasonably have been expected to become the center of automobile manufacture. Detroit carried off the palm. Why?

How can a city develop along a certain line of industry? Why have these cities grown thus? Is it possible for local commercial organizations to prompt such a development or to stimulate it materially?

A city, like an individual, can develop specialization. While this in the past was usually brought about without any definite effort on the part of the community as an organization, it is becoming the practice now to develop communities along scientific lines, and the idea of industrial specialization is growing.

First Earn the Prestige

THAT any amount of effort put into such a movement is well invested is demonstrated by the wonderful prestige which a city gains through specialization. Consider for a moment the advertising which the rubber plants have brought to Akron, the automobile to Detroit, the milling industry to Minneapolis and St. Paul, steel to Chattanooga, shoes to Brockton and St. Louis.

After a certain point—after the development reaches the top of the hill—the rest is easy. Industries in the specialized line naturally flock to the city where the development has taken place when it comes to be advertised through its specialization.

About thirty years ago, a cabinet maker went to High Point, N. C. He opened a shop for the repair of furniture, and when he had no repairing to do, he made a few pieces of furniture and sold them. Before long, he discovered that with lumber close at hand, he could make furniture at a profit and sell it readily. He taught others his trade and in due time he had a factory running.

The factory made money. That was apparent to other people in High Point. The furniture manufacturing business became attractive as an investment. Others entered it. Capital was easily obtained; on the

ground were men trained in the making and the selling of furniture. The industry grew.

As it grew, and the people of that section constantly thought about furniture, factories were established to make parts of furniture and otherwise to aid and supplement the industry. For example, a man invented a machine for wrapping excelsior, which facilitated the packing of furniture. Other such enterprises sprung up.

As the industry developed, there were more and more trained men, more accessories and the more readily was raw material obtainable, and the more willing the public to invest.

Eventually, this and other cities which have specialized came to be known as a market.

vantages which ought to enable him to give more for the money.

An Industrial Recipe

THERE are eight chief factors that enter into such a community development; eight special advantages which make such a city more attractive to others in the same line as a place to locate. In naming them, I do not mean that these are the only things which influence the location of factories, for transportation, good homes, schools, pure water, churches and a great many other things influence the location of industrial plants. The eight I shall name are those advantages which grow especially out of the fact that an industry has already been started. They are:

Skilled and unskilled labor, trained in the industry or suitable for such work, is available. The laborer knows there will be competition for his services and that if he should disagree with one foreman, he can obtain employment in his line without moving to another city.

The center soon becomes an important market for raw materials. Salesmen come oftener and give better service. Deliveries of raw materials are usually better both as to time of delivery and quality, for sellers of raw material realize that the customer in such a city has many other opportunities to buy.

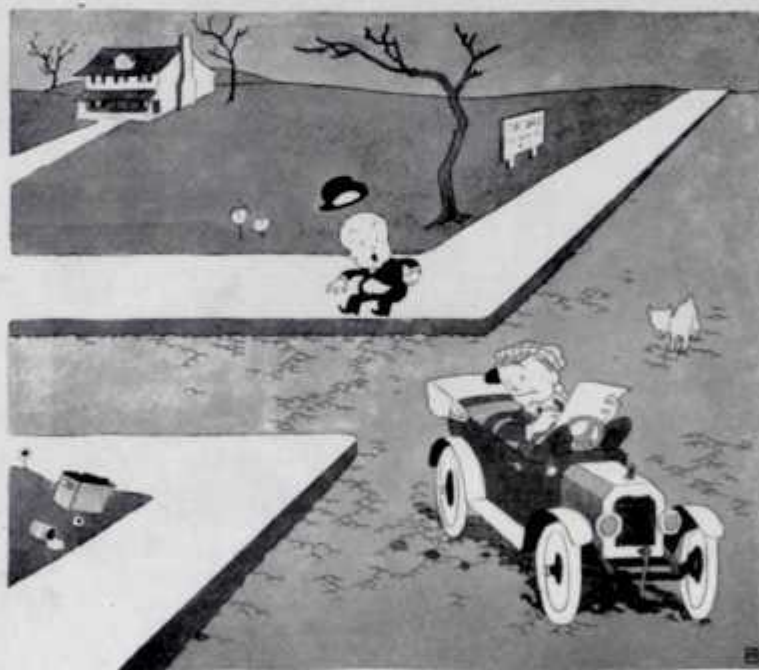
Transportation facilities, incoming and outgoing, are better. Manufacturers in the line, buying and shipping together, get better rates and better deliveries. Outgoing shipments are handled better because the employees of the transportation companies are familiar with the product; with what to do and what not to do.

Capital, either for the expansion of the business or for its current operation, is easily obtained. People in Detroit know the automobile business is profitable and will more readily invest in a company to make automobiles. The Akron banker, knowing something of the rubber business, or the Grand Rapids banker, with a knowledge of the furniture business, will more readily advance money for current uses in those lines. He knows what he is about because he has specialized, just as have the manufacturers.

Accessory or supplemental plants are usually numerous. In Detroit, every conceivable part of an automobile can be obtained. In Grand Rapids, varnish and a great many things kindred to the furniture industry are made.

There is an advertising prestige, such as I have mentioned. Flour from Minneapolis or St. Paul must be all right.

The industry receives every possible support from the community. The Chamber of Commerce, the city officials, and all of the people of the city, realizing the im- (Continued on page 40)



"Yes, Bill, we are checking up the old town's possibilities—we're going to make her famous as a manufacturing center for ship anchors"

Grand Rapids, for example, because of the large number of furniture factories and the enterprise and the cooperation of the furniture trade, attracts thousands of furniture buyers a year. Indianapolis, Cleveland, Cincinnati and Chicago merchants go to Grand Rapids to see and to buy furniture manufactured right in their home cities.

Furniture made in Grand Rapids, shoes made in Brockton or St. Louis, and tires made in Akron have a natural prestige. People prefer them, for they know that there have gathered in these centers great armies of expert workmen, that the development of labor-saving machinery must have been rapid and that the manufacturer has many other ad-



HAVE you ever wanted to buy a book, and yet have you gone without it because you were not sure what to get? If you want to buy supplies or machinery in your business, you know how to find out what and how to buy.

There are ways, too, of finding out what book to buy for the purpose you have in mind, and where to buy it. You do not have to know the author's name, the title of the book, or the publisher, necessarily, in order to get the book you want.

One way of getting it is to ask at the Public Library for a selection of good books on such-and-such a subject. If you look through the table of contents, glance at the preface, look up one or two points that you know in the index, to see if the information given is good,—look up one or two other topics about which you want to know to see if they are explained,—you can tell by spending a few minutes on each book which is best for your purpose. The librarian can give you names, authors, publishers and prices of the best books on the subject you have in mind, and can tell you which are elementary, which are incomplete, which are accurate but dry, which are general and interesting and, if the subject is one admitting two points of view, which are the best books on each side.

The Booklist, a guide to the best new books, published by the American Library Association Publishing Board, 78 E. Washington St., Chicago, Ill., \$1.00. *The Booklist* tells something about the principal new books each month.

The Book Review Digest, published each month by the H. W. Wilson Company, 958 University Avenue, New York City, \$10 a year. It lists practically all of the books published in this country each month, with a summary of the things that have been said about each book by reviewers and sums up these reviews with a plus or minus estimate. This you can see at the library, or you can subscribe for it.

If you are interested especially in business books, subscribe for the *American Economic Review*, which is published four times a year by the American Economic Association, Princeton, N. J., and costs \$5.00 per annum. This gives the names of practically all the best new books of interest to business men and describes many of them. You can get from the library the names and addresses of publishers of particular classes of books. These publishers will gladly send you a notice of new books as they appear. Most of the better firms get out lists with notes which are not purely advertising matter, but give a very good idea of the contents. A few of the houses which have issued lists of business books are:

G. P. Putnam's Sons, 2 West 45th St., New York City.

Ronald Press Co., 20 Vesey St., New York City.

Moody Magazine & Book Co., 35 Nassau St., New York City.

D. Van Nostrand Co., 25 Park Place, New York City.

A White List of Business Books

How to Buy Books

By JOHN COTTON DANA

McGraw-Hill Book Co., 239 W. 39th St., New York City.

A. C. McClurg & Co., 330-352 E. Ohio St., Chicago, Ill.

A. W. Shaw Co., 5 N. Wabash Ave., Chicago, Ill.

New Business Books

HERE are a few books published during the past year on business subjects:

Principles of Salesmanship, by Harold Whitehead, Ronald Press, 1917, \$2.50. The author has had experience as a salesman and also in teaching salesmanship to other men. He tells how to approach different classes of buyers, as the wholesaler, the retailer, the buyer with special characteristics; how to gain an interview, and how to answer the objections and excuses which a buyer frequently makes. Actual illustrations of interviews with wholesaler and retailer are included. The characteristics and methods of the successful salesman are given in detail.

How to Reduce the Selling Costs, by Paul E. Derrick, published by the Associated Advertising Clubs of the World, 1917, \$1.50. It shows how selling costs present greater opportunities for economy than other parts of a business, and proves the need for greater efficiency in selling methods and advertising in order to secure more rapid turnover of goods. More attention has been given heretofore to efficiency and economy in production than in distribution.

Printing for Profit, by Charles Francis, published by Bobbs, Merrill Co., 1917, \$3.00. It contains advice for the man who is running a printing business. There are suggestions for all departments of the business,—chapters on office management, purchasing, estimating, how to secure profit in press work, the printing of a trade catalog, and the making of a magazine.

Principles of Ocean Transportation, by Emory R. Johnson, Appleton, 1918, \$2.50. With ships building in dozens of ports along our coast, the ocean transportation business will need more men with a knowledge of transportation methods. This is the only recent book published in this country which describes the ocean carrier and its services. It gives an explanation of ocean rates, fares, passenger and freight services, and general organization. The most important forms used in connection

with ocean transportation are given in full, and references are supplied in which less frequently used forms may be found. The principles of marine insurance are explained.

Business Statistics, by Melvin T. Copeland, published by Harvard University Press, 1917, \$3.75. It is primarily a book of suggestions for general executives in both large and small business establishments.

The progressive man, before laying plans for the development of his business, first secures facts and figures. He frequently employs someone to make a survey of the market, of competing goods, of prices, of advertising and sales methods used by other firms for the product he is manufacturing. This book suggests many means of obtaining this information. A few of the chapters are given here: Why and how a manufacturer should make trade investigations; Finding the facts that count; Determining the value of a salesman; Advertising and sales department records; Using buyers to find out how to reach prospects; Retail control through sales records; Collecting data to compute costs; Behind the figures.

Foreign Stock Exchange Explained, by Franklin Escher, Macmillan, 1917, \$1.25. If this country is to extend its foreign trade, then the average business man will need a working knowledge of foreign exchange. This is not a mass of figures and calculations for the expert, but rather a definite description of the principles underlying foreign exchange.

Retail Buying, by Clifton C. Field, 1917, Harper, \$1.25. The author was instructor in merchandising in the University of Wisconsin, and also held positions with Marshall Field, and James McCreery, in New York.

It includes explanations of merchandizing and price fixing; a study of turn-over problems; buying for special sales and holidays and to meet competition; information for the retailer in methods of stock keeping and records; and instructions to sales people.

Accounting Theory and Practice, by Roy B. Kester, Ronald Press, 1917, \$2.50. There is an increasing recognition of the fact that a good accounting system is essential for every business. The author analyzes business facts and conditions

and leads, step by step, through the use of non-technical terms, into the details of accounting methods, thus approaching the problem of accounting in a method contrary to the usual practice.

Profit Sharing; Its Principles and Practice, a collaboration of Arthur W. Burritt and others, Harper, 1918. The reasons for introducing profit sharing and the results produced by it in the (Continued on page 45)



Congress Spells It W-A-R

(Continued from page 18)

April told the executive committee of the American Bar Association, we had no real, substantial set of protective laws with which to confront the emergency. Because legislation defining crimes and their punishment had been left largely with the states, there was no federal statute making arson, for example, a federal crime.

While adequate federal legislation has been getting upon the statute books, we have been convicting conspirators who sought to place bombs on passenger vessels under a peacetime law against "transporting dangerous materials in foreign commerce," and for authority to intern alien enemies we have been turning to a law of 1798, which permits the President to impound persons whose liberty would probably constitute a menace to the public safety.

The law of April 20 establishes punishments for the destruction of war material or war premises in such wide terms that the Department of Justice declares it the most sweeping of all war statutes of its kind.

The Department asserts the bill is so broad as practically to protect transportation and shipping facilities, public utilities, and articles and supplies of every kind,—the whole product of agriculture and industry in the United States,—and causes it to be criminal even to make an article in a defective manner. All willful acts of destruction or injury which directly or indirectly weaken or retard preparations for war or its actual conduct come within the new law.

Protection of Plants

UNDER a Presidential proclamation of last November the Department of Justice has regulations which are intended to prevent improper persons from approaching waterfront facilities, and a pass system is in force. Owners of piers, warehouses, etc., on a water front are urged to have as few entrances as possible, with an inspector at each; each person who enters has to show a pass bearing his photograph; and care is taken that when the property is closed all persons who entered have departed. These regulations, in the belief of officials, are capable of considerable adaptation to the situation of plants which are engaged upon war work and wish to guard against hostile acts.

A Larger Army

THE selective-draft law of May 18, 1917, is being supplemented in two ways. The men who have become twenty-one years of age since the original registration on June 5 last year are to be registered, on June 5 this year, and as other men subsequently reach this age they will be added to the lists, probably through quarterly registration.

At the same time authority of law is being given to call into military service registered men by classes. This will mean that men assigned to class one as a result of questionnaires will be called first. At present there are in this class 2,000,000 men, net after deduction of men in the merchant marine and men with physical disabilities; and the number will be augmented when the registration of this June is made. Without regard to the classifications into which registered men are now divided, and regardless of state quotas, this legislation will also permit the government to call into service men who are skilled experts in agriculture or industry.

Enlargement of the number of men who may be called for military service is also in contemplation. The selective-draft law of last May, in addition to a full complement for the Regular Army and the federalized National Guard, allowed two drafts of 500,000 men each. After returning from France, however, the Secretary of War presented to committees of Congress a programme of expenditures that would total fifteen billion dollars and contemplate 3,000,000 men under arms. The Chairman of the Committee on Military Affairs of the House has since introduced a bill which would authorize calling into military service 3,000,000 more men, with a limitation that the number of enlisted men drafted under the original law and the amendment should not exceed 4,000,000. With the Regular Army at 300,000, the National Guard at 450,000, and necessary officers, this would mean an American army around 5,000,000 in fighting strength.

Coordination of Departments

THE bill which was introduced in the Senate early in February to give the President authority to coordinate or consolidate executive bureaus and agencies passed the Senate on April 29, after five weeks of debate. It passed the House on May 14 and, being unchanged, went at once to the President, who approved it on May 20.

The authority conferred by the bill is to be exercised only in matters relating to the conduct of the war. Appropriations can be spent only for the purposes indicated by Congress. Power from the bill cannot be used for the complete abolition of any bureau. Six months after the war all departments and bureaus which have been affected are to resume their former functions and duties.

Subject to these limitations, the President may transfer duties or powers from any one of the ten departments, or from their bureaus, to another, and may deal in the same way with commissions. He may shift personnel, too, and responsibility for expenditure of appropriations. Attempts to have exceptions made with respect to such bodies as the Interstate Commerce Commission have so far been unsuccessful; only one field is specifically mentioned, the production of airplanes, their engines, and equipment, as to which the President can create a special agency, and put it in complete control.

Government Finances

PROBABLE expenditures and income in the twelve months that begin with July will occupy increasing attention. Estimates of the amount that would be needed for expenditure were published last December, and reached \$13,500,000,000. Some of the items in this aggregate have since been enlarged. The Army has added \$5,000,000,000 to its original request for \$10,000,000,000. The Shipping Board, which six months ago thought it could spend \$900,000,000 in constructing ships and plants for building them, has now increased its expectations until they exceed \$3,000,000,000. Besides, the Shipping Board asked on May 8 for authority to make contracts for vessels to cost a billion dollars more. For construction of merchant ships, and independently of the cost of acquiring ship-building plants and commandeered vessels, the Shipping Board obviously has a programme which contemplates expenditure of four bil-

lion dollars; this means that the programme has increased eight times over since last June.

Because of increases in various estimates the contemplated expenditures in the year to June, 1919, may easily be placed around \$20,000,000,000,—roughly nineteen billion for war and one billion for the ordinary functions of the federal government. Loans to allied governments might be expected to bring the expenditure side of our accounts to \$25,000,000,000.

Means for providing funds for such an outlay have to be found and the first question is about the state of the Treasury at the beginning of the year, July 1. On May 1 the net balance officially reported was \$921,000,000, but a sum larger by \$78,000,000 had been placed to the credit of disbursing officers. In other words, more than the net balance had been allocated to specific purposes and there was no surplus balance to assign to a new expense.

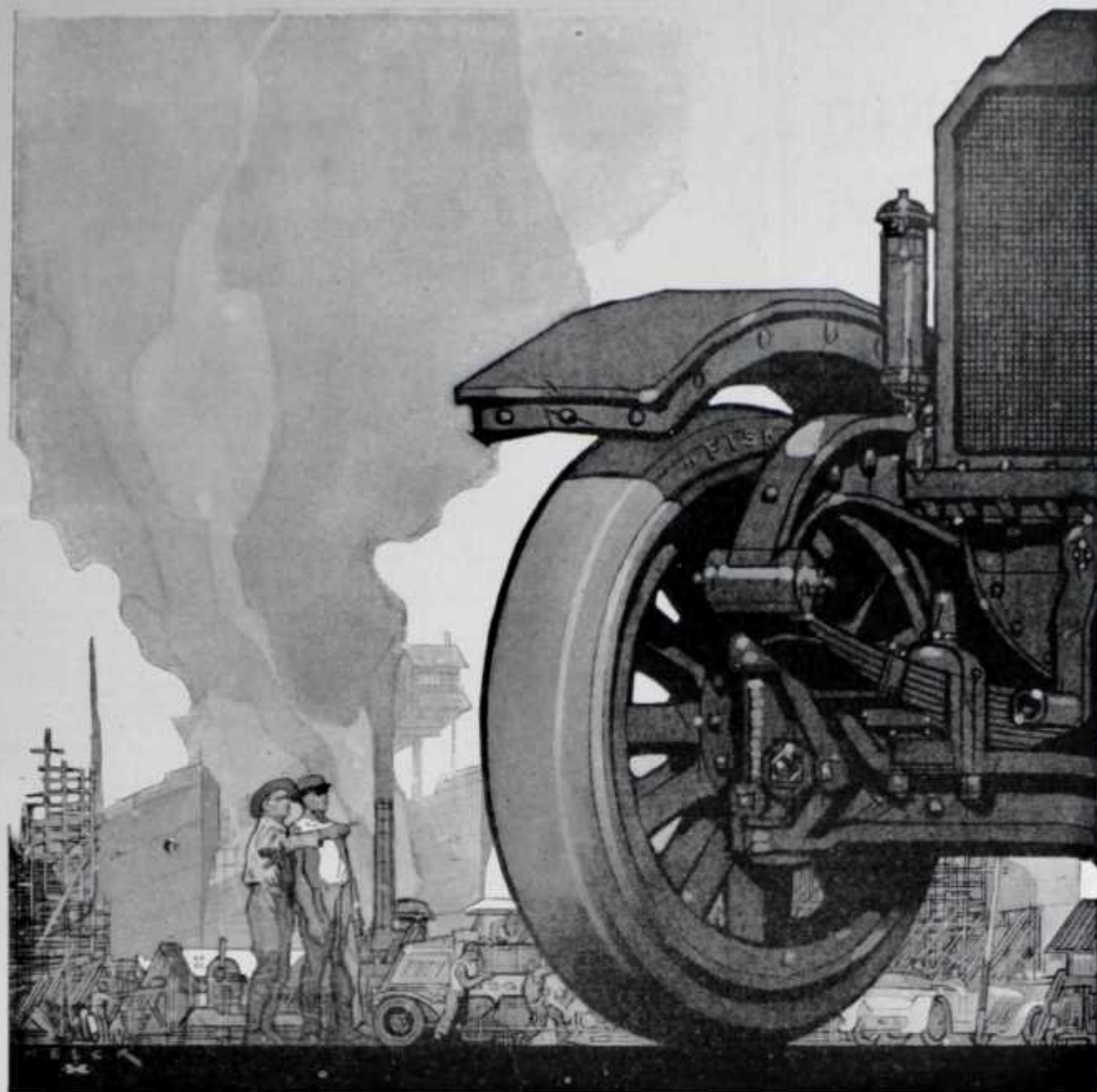
To be sure, taxes are being paid with a rate of acceleration that will reach its climax in June. As early as February, \$18,000,000 in taxes upon excess profits and incomes were turned into the Treasury. In March the amount was \$49,000,000. In April it was \$61,500,000. During the first nine business days in May it was \$236,000,000. If the relation of payments of the corresponding taxes last year to May 1 to the total amount reaching the Treasury before July 1 could be taken as applicable this year, the total for the year would be about \$1,100,000,000; but the fact is that, in addition to direct payments which appear in the statements of the Internal Revenue Bureau, well over \$1,000,000,000 has already been paid indirectly, through investment in certificates of indebtedness that are due in June. The official estimate seems to be that around \$1,500,000,000 in new money will go into the Treasury in May and June from taxes on incomes and excess profits, this money with the anticipations through investments in Treasury certificates and direct payments making these taxes for 1917 realize around \$3,000,000,000.

Other taxes may add a hundred million or so in May and June, instalment payments on the Third Liberty Loan will exceed a billion, and sales of war savings stamps will add their quota. Altogether, actual receipts in the two months may reach three billion.

Half of this amount will be needed to meet certificates of indebtedness which were issued in anticipation of the Third Liberty Loan and fall due during the two months, presumably advances to foreign governments will take at least six hundred million more, and the nine hundred million remaining will scarcely meet the disbursements on account of the war. Besides, something over \$100,000,000 in interest on our war debt will have to be met in the two months. Thus, on July 1 the condition of the Treasury, unless further certificates of indebtedness are issued, will at best be much as it was on May 1; that is, there will be a balance of approximately \$900,000,000 with the greater part already assigned to particular purposes through being placed to the credit of disbursing officers.

New Taxation

THIS situation together with the enlarging expenditures expected during the rest of 1918 and the first half of 1919, has led the Treasury Department to suggest the need of heavier taxes. It has placed before the President a financial statement which has not yet been made public. As yet, Congressional leaders incline to oppose a new tax bill at this session of Congress, and may endeavor to have it delayed until winter. In that event the



A BILLION DOLLARS, half a million workmen and houses for them to live in—2000 ships! These are the big figures of our 1918 ship-production program to help the Allies.

*"There is now a Fisk Tire
for every motor vehicle that rolls."*

MATERIALS must reach the yards if ships and houses for the workmen are to be built.

MOTOR TRUCKS, by relieving freight congestion, are doing wonders in the transportation of materials.

TO KEEP GOING, trucks must have dependable tires.

FISK TRUCK TIRES are dependable, sturdy and strong. They steadfastly meet any service demand put upon them.

WHEN you need dependable solid tires—buy FISK.

FISK SOLID TIRES

IN THE HEART OF THE HOME

If you would but step into the home of anyone of the millions of *SM* Stamp Collectors throughout the United States, it matters not whether in Michigan or Mississippi, Connecticut or California, a most convincing picture of thrift would be seen.

Further, you would thoroughly realize that The Sperry System renders its greatest benefit in the heart of the home.

The housewife who wisely and rightfully receives *SM* Green Stamps as her discount, acquires a saving denied those who fail to recognize the advantages of paying cash.

The habit of "paying as you go" materially benefits dealer and consumer and builds for better conditions in the community. The giving of a discount to encourage this sort of trading is a fair and just return between merchant and customer. The Sperry System of profit-sharing has been a boon to better business since 1896 and is today bringing seller and buyer into closer relationship in a practical and thoroughly human way.

The Sperry & Hutchinson Co.

GEORGE B. CALDWELL, Pres.

2 West 45th St. New York City

bill might be drafted during the interval. Whatever the procedure, no new tax bill may be introduced until rather exact figures are at hand for the results of the present law, but meanwhile there may be some preliminary drafting.

As England's fiscal year ends with March, its revenues for the last year have been announced. The principal items were:

Customs.....	\$355,000,000
Excise.....	190,000,000
Estate duties.....	155,000,000
Income and property taxes.....	1,195,000,000
Excess profits.....	1,000,000,000

England's war expenditures in the year that closed in March were \$12,400,000,000 and 20.3% were met from revenues. This percentage has steadily risen, having been 7.8 in 1914-1915, and 18.8 in 1916-1917.

On April 22 England's budget for the current year was announced. Expenditures were estimated at \$14,800,000,000; of this sum the Ministry of Munitions will lay out \$4,000,000,000. Taxes are to be increased in England by \$500,000,000 and are to amount to 28.3% of expenditures. The increase comes mostly in the income tax. The excess-profits tax, which is now 80 per cent, was left as it is, on the ground that it already tends to curtail business, but it is nevertheless expected to raise more money this year,—in fact a total of \$1,500,000,000.

England's "normal" income tax remains as it is on smaller incomes, but rises until on incomes exceeding \$12,500 it is 30%, instead of 25%. The super-taxes, which begin at \$10,000, are increased until on incomes over \$50,000 they are 23% instead of 17. Consequently, incomes over \$50,000 will pay at a rate approximating 33%.

In England's new budget direct taxes are not so prominent as had been expected and indirect taxes are relatively more important. The postage rate is made three cents, checks have a tax of four cents instead of two, higher taxes go on beer, tobacco, matches, and sugar.

Finding the City's Biggest Asset

The most novel of the "indirect" taxes, however, is on luxuries. Just what are luxuries the British cabinet seems to have hesitated to decide; at any rate, it has asked the House of Commons to help in preparing lists. The tax, however, is to be 16 1/2% upon the retail sale price.

This levy is much less general than the tax Germany for two years has been laying on "turnover," at one-tenth of one per cent. This impost has been placed upon all sales of commodities and compensation for services, including professional services. Striving zealously against direct taxation, Germany is now increasing its general rate to half of one per cent. On eight classes of luxuries, including a variety of things illustrated by the items of old prints, harmoniums, motor boats selling for more than \$200, carpets bringing over \$50, and furs of every sort, the tax is to be 10%, while on precious stones, articles of precious metals,—with a special exemption for silver watches,—it will rise to 20%.

On April 1 France put into effect its new tax of 10 per cent of the retail price of luxuries and counts on it to realize \$125,000,000 a year. It classified some articles as outright luxuries and other as luxuries when they sell for more than a stated price. In the first class are included such a wide range of articles as cameras, gold jewelry, silk stockings, rouge, square pianos, riding horses, and canoes. A lamp shade or a toilet article becomes a luxury when it costs more than \$2; a man's hat ex-

ceeding \$4, a dog or a pair of women's shoes that fetch more than \$8, a frock coat that entails expenditure of more than \$40, an upright piano costing over \$240, and dining-room furniture exceeding \$300 fall into the same category.

A Peace Estimate

This year the British cabinet not only presents its war budget but sets out estimates of necessary expenditures in the first year of peace. This "peace" budget it puts at \$3,250,000,000. It separates this total into

Interest on debt.....	\$1,900,000,000
Pensions.....	250,000,000
Ordinary governmental expenditures, at pre-war rate.....	865,000,000
Additional expenditures.....	235,000,000

Such annual expenditure will require continuance of taxation at present rates, or higher. Accordingly, discussions about the benefit of a levy on capital to reduce the war debt, and the annual interest charge, have reached the House of Commons, and some newspapers recall that a capital tax would not be without precedent, since in earlier centuries an English king exacted as much as a quarter of the goods in the country, that he might wage war.

Housing

CONSIDERATION of any new taxation will proceed for some time in committee, and will not for the time being delay other legislation. The bill which authorizes the government to proceed with plans for housing elsewhere than at places at which the Emergency Fleet Corporation can use its \$50,000,000 has reached its final stage. It contemplates expenditures of \$60,000,000, of which \$10,000,000 is for employees of the government in the District of Columbia. The housing is to be for workers at arsenals, navy yards, and industrial plants connected with and essential to the national defense.

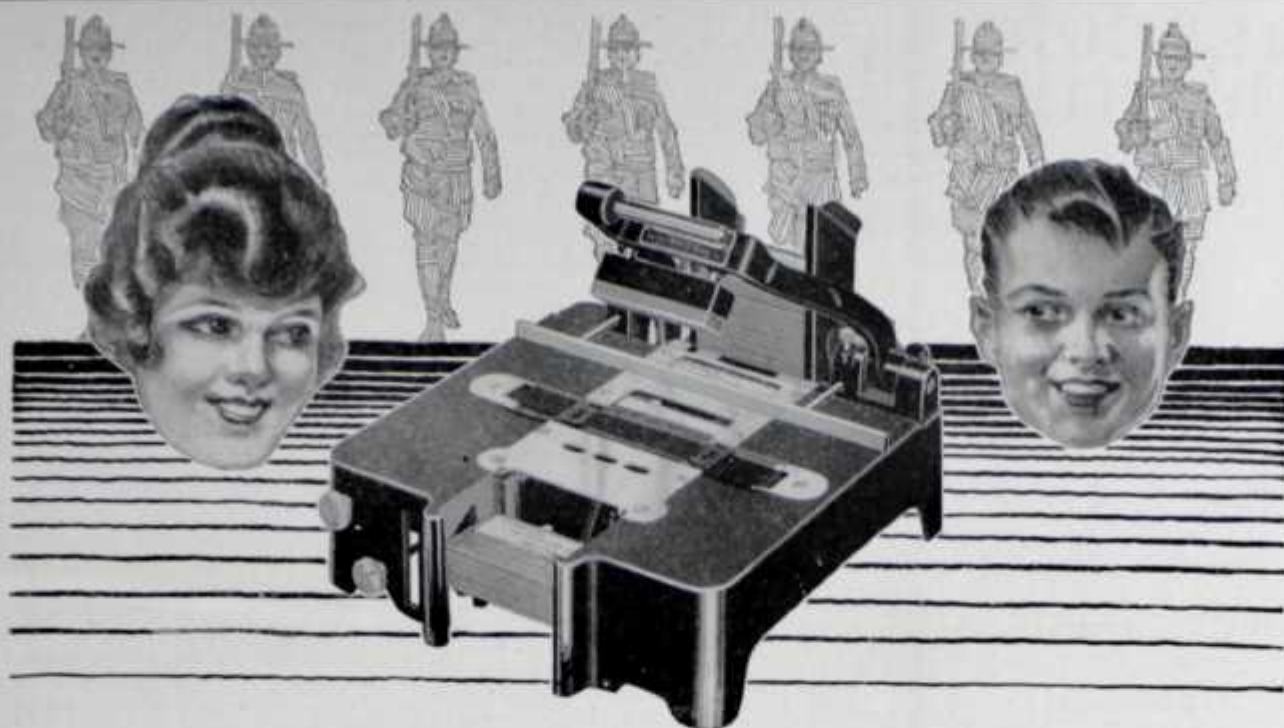
Under this bill it appears to be planned to concentrate the government's housing arrangements, either directly or by delegation from the President, in the Department of Labor, except the housing undertaken by the Emergency Fleet Corporation. The Department will act with an advisory committee from the War Department, the Navy Department, and the Shipping Board. The better grade of houses erected will cost from \$1800 to \$3000. The cost of housing unmarried men is estimated at \$300 to \$350 each.

Prices

THE price guaranteed by the government to growers of wheat should be raised to \$2.50, in the opinion of the Senate. The House has had difficulty in agreeing, and the result of the difference in point of view between the two ends of the Capitol cannot yet be foreseen.

Authority to guarantee prices and otherwise encourage production of "minor" metals was given by the House on April 30, but the bill has not yet passed the Senate.

Meanwhile, price-fixing by administrative action continues. The Price-Fixing Committee appointed by the President, using voluntary cooperation from industries to supplement the general statutory powers with respect to articles needed by the war-making departments, is the most active instrumentality. It has most recently dealt with prices of wool and hides. It may later act with respect to cotton goods. The War Trade Board in reducing imports of crude rubber has sought to control prices. Altogether, prices are now controlled in one way or another for



Let Your Eligibles Answer the Nation's Call!

Daily, men who are eligible to army service are being called away from their work. When your Country calls for the men doing the important clerical work in your office, replace them with a boy or a young lady and an office machine.

In payroll work, in the bookkeeping department, in the advertising department—everywhere—the Addressograph is being used to speed up work, so that those who remain at their desks can double up and carry the extra load left by vacancies.

Figures recently compiled from an investigation show that the time of approximately 750,000 clerks is being saved right now through installations of the Addressograph. A vast army, indeed!

If you have more than 75 employees, you can save a lot of time in your payroll work, for instance. The Addressograph will write the names, numbers and rates on your pay forms 10 times faster than the work can be done by hand. Speeds up the payroll and releases clerks for other duties.

In the bookkeeping department the machine heads up statements with the correct name and

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about twenty classes of important commodities.

The latest legislation proposed is for regulation of rents in the District of Columbia. A local rent administrator is in prospect. He will make decisions upon the basis of rents last October. This bill is intended to meet an emergency created by a war population in a peace-time capital.

Water Powers

THE special House Committee on Water Power has not yet reported the bill which it is expected to bring out at this session. It has been awaiting testimony from the Secretary of War, who has been occupied with military matters before other committees, and from the Secretary of Agriculture. On May 15 the Secretaries appeared before the committee, which may report its bill before the end of the month.

Meanwhile, the Committee on Foreign Affairs has before it a bill for regulating diversion of water at Niagara, which does not come within the purview of the general committee. This bill, however, follows the principles of the bill relating to power sites on navigable waters and the public domain, adding a provision for commandeering under which the government might take over any plant at Niagara Falls and divert power to any designated person for use in connection with national defense.

On the Canadian side development continues. The Ontario legislature has voted to the Hydro-Electric Commission of Ontario \$7,000,000 for more power development and extension at the Falls, and \$2,000,000 for use in other parts of the province.

Other Measures

THERE is no lack of other legislation in progress. There is to be debate over the rate of postage on second-class mail, which in

consequence of the war-revenue law of last October will be changed on July 1, unless a repealer is enacted. The use of persons in penitentiaries to make articles needed by the government in time of war, with provisions about transportation of convict-made goods in interstate commerce, is apparently to be sanctioned. The Shipping Board may receive legislative authority to control ocean freight rates directly instead of through the indirect methods it now uses, power to acquire terminals, and new authority to see that enemies do not get vessels constructed in our shipyards for use after the war. Amendments are coming forward to clear up points in the war-risk law through which our soldiers and sailors, and their dependents, are cared for. Even threads on screws occupied the attention of the House for a day; a hundred million screw threads, additional to the screws that are used in wood, are made in the American States every day and these threads, in an age when machines of all sorts are characteristic of the day, have great importance; the plan is to have a commission which will standardize the threads in order that delays because of misfits may be minimized. A national trade-mark has been advocated by the Department of Commerce before a House committee, but the idea is in abeyance because if the mark is to be used to guarantee quality a scheme to establish standards and see they are met must be elaborated. On May 4 the Secretary of the Interior declared that the bill for leasing public lands containing oil, coal, phosphates, etc., should be enacted within 60 days, in order that a shortage in fuel oil might be averted; the bill was reported to the House on May 14.

These varieties of legislation illustrate the breadth of the interests of Congress; it bids fair to equal the Latin poet who declared that nothing in human affairs was outside his field.

The Enemy's Plans For Peace

(Concluded from page 28)

difficult or impossible for him through the marks impressed by the native customs officials. To meet this it will be difficult to do anything so long as the goods are shipped directly from Germany, by a short and uninterrupted route to save on freight charges. In the course of time, small unpleasantnesses of this kind may also disappear on account of their triviality. Should the damage done by them become unbearable in the long run, then denationalization of goods, though it will eventually raise the gross expenses, should not be avoided; for the other expedient, namely, the taking over of these products by the foreign customer at the place of manufacture, and their transportation at his cost and risk would scarcely obviate the trouble in the final result."

Our author has some worries about post-war American competition. He recommends the paying of more attention to certain American methods. "The Americans," for example, "waste no energy on the individual hobbies of the consumer, but teach him to choose from among a few types the one best suited for him." There may also be more difficulty than formerly about underselling the American competitor, "for the enormous profits which the American factories reap through their unscrupulous production of war materials enable them to wipe out liabilities in a way hitherto considered impossible, and to lay up reserves which they can fall back upon with full assurance, when striving to outbid others. To meet this situation, organized action will be just as necessary as was

protective action, in the case of raw materials supplied from other countries. New rules will have to be formulated here and brought into effect, rules which will treat the question not only from the mercantile-political standpoint, but from the standpoint of industry and industrial tariffs also. This latter aspect of the question will therefore demand thorough study. We must likewise see whether in a political way, tariff bills cannot be framed so as to facilitate the rapid growth of the export trade. It is not improbable that we may even have to dip into the question of export premiums in this connection."

There is no doubt that even in times of war, Germany is preparing for peace. She is going about it with characteristic disregard of all interests but German ones. There will be no more consideration for honesty, convention, internationalism, or treaties in her industrial fighting than in her militarism.

Sidelight on German Wheat

THE latest and most authoritative information concerning the Ukraine wheat situation is all directly in line with Dr. Kellogg's article in THE NATION'S BUSINESS for April. Information from Germany shows that Hungary has lately had to reduce its flour ration, while the German Deputy Chancellor has just stated in the Reichstag that "a reduction in the bread ration is not at present contemplated." Perhaps this will make the Germans rather thoughtful as to what will happen a little later.



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Slowing Down After Speeding Up

(Concluded from page 25)

man arrangement, supply in neutral and other countries was deficient, and the price rose by 500 per cent, while Australia had no market for her ores. Thereupon the United States doubled its capacity to produce zinc, and when the war closes will probably be equal to turning out two-thirds of the world's requirements.

In order to ease the situation in Australia, and obtain future independence from Germany, the British government contracted to take 100,000 tons of Australian concentrates a year, for ten years, and 45,000 tons of spelter made in Australia—an undertaking that figures to \$125,000,000 a year. In April England assumed complete control of Australia's zinc ore. The consequent increase in zinc-smelting has had its share in creating the over-production of sulphuric acid to meet which steps are now being taken in England.

The East Copies the West

JAPANESE ships in considerable numbers are going to become available for use where ocean transportation is most vitally needed by the United States and the Allies. A good part of these boats, however, will not be taken from existing fleets but will come out of new construction, thus leaving the Japanese steamer fleets largely intact, at around 2,000,000 tons.

That Japanese owners are finding much use for their vessels on new routes is apparent from plans which have been in preparation this spring. A new monthly service, for example, was to be inaugurated, with three steamers, between Yokohama and France. Another line with monthly sailings was to have its first sailing in May, and with monthly boats would connect Calcutta and New York by way of South Africa. Incidentally, this line would give the operating Japanese company a round-the-world service, as it already has steamers sailing between Calcutta and New York in the opposite direction,—i. e., by way of Yokohama. Japanese boats may also go on the run between Australia and England. Some of these lines obviously undertake to replace the service formerly rendered by steamers which have now been concentrated in other waters.

Other facilities go with ships in developing trade. In order to support steamship lines and merchants the Japanese government is understood to be organizing an institution capitalized at \$50,000,000, with the chief officers appointed by the government. Its title is the Home and Foreign Enterprise and Trust Company and it will finance commercial and industrial activities in China and the South Sea Islands. Obviously, Japan has noticed the British Trade Corporation and taken a leaf out of the book of her ally.

Rationing Jam and Walking Sticks

MASS-FEEDING sounds unpleasant, but in Germany and Austria it has come to be in demand. It is accomplished through public kitchens, which are nothing more nor less than an improved sort of soup-kitchen in euphemistic disguise. Toward the end of 1917 it was estimated that in German towns of more than 10,000 in population one-quarter of the people used the public kitchens and in the largest cities one-third.

Public kitchens afford a real convenience in such cities as Leipzig, where no less than nineteen different kinds of food cards are used in the rationing system. Almost anyone would

prefer to present his card at a public kitchen and obtain a consolidated meal than undergo the formalities incident to direct use of all his cards. Besides, in presenting cards to the grocer one has in these days to be so extremely deferential that he has misgivings if he can ever get that worthy back into his "proper place."

Public kitchens appear to have a close connection with compulsory rationing. Soon after a belligerent country has gone to rationing it has developed public kitchens. England is no exception, although its multiplying institutions of this sort have not yet attracted the patronage of middle-class and professional people, as in Germany and Austria. One of England's kitchens recently opened offers food only at noon. Its menu is not without attractions, including apple tarts and jam rolls, at five cents each. Its more substantial parts are no more expensive; two cents buys a potato in its jacket, four cents is the cost of half a pint of stew and dumplings, the same price is good for a pint of soup, and 8 cents obtains a portion of the most expensive dish, meat patty. These prices are exceedingly moderate when they are compared with retail prices of food. According to the prices fixed by the food controller, a British housewife pays at the market twenty-five cents a pound for so plain a commodity as kippered herring, and thirty-one cents a pound if she prefers fresh cod.

Rationing is not so complete in England as in the central powers. Sugar, butter and its substitutes, and meat are among the commodities rationed in England, but bread and potatoes are not. Some good housewives apparently welcome the meat ration, because it enables them to escape the time-honored ordeal of preparing a big Sunday dinner. Tea-tippers, however, are having a bad time of it. In an absent-minded moment one of them accepted raspberry leaves as a substitute, made a brew, discovered a taste of hay with a reminiscence of cod-liver oil, and became more bitter toward the Germans than ever. Insult has been added to injury, for not only has tea been standardized by the Government but it has been held by the British courts not to be "food."

Some of the geniuses of earlier generations would have a hard time of it with civilian rations in Europe. Many of them are still remembered for their appetites. Thackeray and Dickens were both masterful at the table. Balzac was equal to making a dinner of eight dozen oysters, twelve cutlets, a duck, a pair of partridges, and all the customary "trimmings." Herbert Spencer once went upon a vegetable diet, and declared that after he returned to meat he had to rewrite everything he did in the interval, to get virility into it.

Regardless of the effect on genius, rationing is spreading. Even walking sticks have come under governmental control in England, and presumably a prospective purchaser will soon have to present a license to carry such an ornament. The rationing of heat and light which began on April 2 is a more serious matter. Its purpose is saving of coal. Every one has to decrease his use of gas and electricity by one-sixth, shops may not have lights in their windows, theatres may use footlights only in the afternoon and evening, and public eating places may not serve any hot food after half past nine o'clock at night.

As for the meat ration, it allows each person his portion, in accordance with his tastes and his pocketbook: a meat coupon may be used to get ten cents' worth of "butchers' meat," 10 ounces of horseflesh or venison, or a partridge,—each at its particular price.

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Whether you are a dollar-a-year man or a dollar-a-day man your business today is the nation's business. You have been told to conserve wheat, to conserve sugar, to save fats, and fuel and everything else—except your health. That is *your* lookout. But have you realized that if you overtax your strength, as we all must do these days, and if you go under, your loss is the nation's loss?

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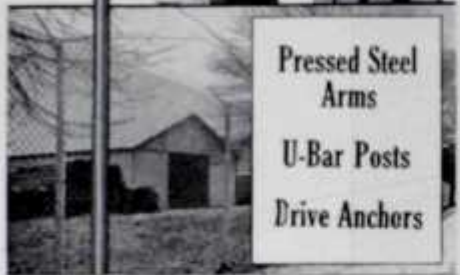
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Why Cities Grow—And Grow Famous

(Concluded from page 39)

portance of the industry to the community and having pride in the reputation it has given the city, will go out of their way to make the convenience of the manufacturer their convenience.

The manufacturers in the specialized line exchange information and ideas. It is the center of things in the industry. They operate labor exchanges and have uniform labor policies. They often ship together. The Rubber Board of Trade at Akron and the organization of the steel industry at Chattanooga are examples.

Briefly, before I tell how the individual community can develop along a certain line, let me tell more about cooperation at Chattanooga. The iron men there have a joint exhibition hall where nearly 50 manufacturers cooperate in the exhibition of the products of the city, and the manager of this exhibit is also the manager of a joint shipping bureau which has saved thousands and thousands of dollars to the manufacturers, especially because so much of the product is heavy and freight is a vital factor.

No manufacturer does his own freight routing. None handles his own claims against the roads for adjustments. All this passes through the hands of the one man.

As I entered the office of this man, I observed a big blackboard on the wall, and on it was written the name of every road entering Chattanooga. Opposite the names of the roads, were statistics showing the number of freight adjustment claims that had been made and the number that had been settled the month before, and the road whose name was at the top of the list was the one which had settled the greatest percentage of claims within the period reported.

Preference is given the road which settles claims most promptly and one Chattanooga manufacturer told me that the central bureau saved the members \$6000 the month previous to the day he talked with me, and it was \$6000, he said, that they could not have collected had they operated separately.

What Is Your City's Biggest Asset?

OCASIONALLY, raw materials or other special advantages are the reason for the focusing of an industry in a certain city. For example, shipping facilities have been largely responsible for the great milling industry of Galveston. Clay, coal, natural gas and other such influences have been responsible in other cases. For the most part, however, the eight things I have enumerated are chiefly responsible for the concentration.

Therefore, any community which has a prosperous industry in a given line which is suitable, on general principles, for the industry, may expect, through intensive cultivation and by the aid of good management and community spirit, to establish other factories in the same line.

When the community becomes interested as a community, a prospective manufacturer sees an opportunity to deal with a sympathetic city. He knows that the city already has men skilled in the line. He sees, either existing or in prospect, all of the eight special advantages which I have named. It only remains for the community to appeal to him and "sell" him what it has to offer. Money bonuses, free sites and other such inducements are not valued as highly, in the mind of a capable manufacturer, as are elements which have a tendency to insure permanent success.

In your own city, what is the biggest single industry? What is the biggest individual plant? Why is it big? There must be a reason.

Add to the reasons for its bigness—whatever general or special advantages there may be—the eight things I have named in this article, which are out of the experience of other cities which have enjoyed the benefits of specialization, and you have the formula for a "sales talk" that should bring other similar industries to the city, or should facilitate the organization of additional successful enterprises in the same line.

When one more factory in the line has begun to succeed, all the eight advantages I have named double in value and are still stronger for presentation to the next plant desired.

Concentration, specialization or whatever we may call such a movement, is good for everybody—good for the manufacturer, good for the consuming public and good for the city where the development takes place.

Whatever is good for a manufacturer is good, in the long run, for the people who buy his goods, and vice versa. Other things being equal, the manufacturer can make better goods for the same money or the same goods for less money in such a city, as is apparent to all who have studied the problem. There are, of course, exceptions to this rule, but the principle has certainly been demonstrated to such a degree as to call it a rule.

Growth That Is Permanent

THAT city industrial specialization is practical is being demonstrated in a definite way in many places, and there is good reason to believe that the business men of many communities are going to see it is through specialization that permanent and desirable city growth can be most readily assured. For example, the city of Louisville believes in the principle to such a degree that it has raised more than \$1,000,000 as a factory fund.

The manner in which this fund is to be used is also indicative of the times in city progress. The \$1,000,000 is not for lame duck seekers after bonuses or free sites. First of all, it is being used to make a searching survey of the things which the city has to offer to a prospective manufacturer. By lines, an investigation is being made which will divulge conditions as to labor, fuel, transportation and the various other essentials of manufacturing. The bureau which administers the fund is assembling such a wealth of information that when it finds Louisville affords especially good facilities along a given line, the city's selling argument will be almost irresistible.

Oklahoma City, a few years ago, did a similar thing with glowing success. Within a comparatively short time, after making a careful survey of the advantages the city had to offer, it made itself a great distributing center for agricultural implements and later, by similar methods, obtained packing plants.

Other instances might be named, for many cities are awakening to the fact that an ambitious city, like an individual business man, must make a survey to determine definitely what it has to offer and then, after classifying the information, offer its advantages much as a business man sells his goods.

The future will see more and more city specialization, for the principle is economically sound.

Cities which now see the opportunity and which enter the field, after a careful survey, to win industries which they are especially capable of caring for, will profit uncommonly, because most cities are not fully awake to the opportunity. Later, all cities which have any aspirations will be at it.

Coal: Enough to Fight On

(Concluded from page 11)

conditions everywhere. Thus we disturb established channels of distribution as little as possible. Those men have become a part of the machinery of the Fuel Administration. Over them we place the biggest man we can find, giving each man authority over the established machinery of a given region, with instructions to administer it.

Each of these men in authority looks out for his particular part of the job. If a certain industry, for instance, needs five cars of coal a day, and has been placed on the preferred list by the War Industries Board, he sees that it gets it, and tells a given mine to supply it. If need be he slices into the supply of those who are not on the preferred list. Not a pleasant or an easy job, let me say, but necessary.

The allotment of coal worked out for the coming year is based on the actual requirements of each state. For example, a certain middle western state used 34 million tons last year, but will have to have 42 million tons for the coming year. They must have that increase if their war plants are to run, and their people to keep warm. They will get it.

We have been busy of late drawing red circles on certain maps over at the War Industries Board and indicating that no new war plants must be placed within those circles. The reason is that we want every additional plant located where it means the least railroad transportation to supply it with coal. In some cases factories should be on top of the mine.

MANY mistakes have been made in the past in locating new plants. Some of those badly situated plants will have to get their coal at the expense of non-essential industries in their respective zones. Lately, however, the railroads and the Fuel Administration have been consulted about such matters.

That was not formerly the custom.—A manufacturer came to us last week and said a certain department of the government wanted him to tack an addition onto his factory that would call for 1400 tons of coal a day. It is in a greatly congested section, and both coal and material would have to be gotten by a long haul. We told him that his 1400 tons would have to come from his present allowance. That settled it.—Now a few months ago that man would have gone ahead and built his plant, and called on us for coal later; and we would have had to give him exactly the same reply,—but after the plant was up and filled with war contracts.—No, this is not a pleasant job. It's fourteen hours a day and maledictions at the end.

So you see the facts all point in one direction. We shall keep warm; we shall have coal for our war industries and can therefore do our part in France; and our non-preferred industries have time to adjust themselves before winter sets in. We shall pull through if we pull hard enough—and in my opinion we shall do it.

New List of Government Buyers

In March THE NATION'S BUSINESS published a pamphlet entitled "Purchasing Offices of the United States Government in Washington," which was corrected up to March 1.

Since this pamphlet appeared many changes in the organization of the government have taken place and a revised list of the purchasing offices of the government is about to be published, which will contain not only the changes which have occurred but also the outline of the government's purchasing organization outside of Washington. The title of this pamphlet will be "Purchasing Offices of the United States Government" and it will be available on request to the readers of THE NATION'S BUSINESS.



The Help You Need—

It is not men alone, but men and methods

YOU may be running short-handed right now, when there is more business available than you've ever seen before. The labor problem is hard for anyone to remedy. But methods can be improved. Therein lies a measure of relief for the situation.

Invite us in to go through the plan of your record systems and your filing systems and bring them down to date. If there are better records for your business, quicker or more accurate ways of handling your work—you want them badly, and of all times now.

Proper records intelligently used cut down waste; simultaneously they show where to expand. Records are the core of the business. Often they are the



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business. Only systems, therefore, that represent the most modern advances should be kept in use anywhere.

Records of that type are "Y and E" records, developed by thirty-eight years of study and experience—years in which we have been making nearly a million system installations, covering every line of business; and to be most intelligently used, records should be kept in "Y and E" files, where they are protected against disarrangement and made quickly available for constant use.

Let us look into your record keeping problems and see if we can help you to a solution. There is no charge for "Y and E" System Planning Service.

Systems and Filing Equipment are offered for: Correspondence, card ledgers, cancelled checks, purchase records, blueprints, machine bookkeeping, documents, banking records, catalogs, credit reports, employment records, sales records, advertising records, insurance records, filing-cups, etc.

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An Empire Takes Stock of Itself

AN empire is a magnificent thing, as even a man who does not want such a possession for his own country may readily admit. What an empire really means a commission which since 1912 has been surveying the dominions of England has recently endeavored to make clear.

The report of the commission takes readers upon an exploring expedition, providing entertainment and making some sly remarks by the way. For example, it suggests that a Britisher who wants an idea of the vastness of Canada should travel through it when the heat of summer or the cold of winter makes him anxious to reach his destination. It visits Saskatoon, goes down Peace River, skirts the million square miles of Canada that are still unknown, stops at the lovely island of Tasmania, looks at the pipe-line 350 miles long that carries water into Kilgoorie for its mines, follows Captain Cook on his voyage along the Queensland coast where the ship glides past densely wooded shores in the midst of flights of brilliant butterflies and snow-white cockatoos, puts in at Capetown and wanders from gold and diamond mines to the veld where pastoralist and agriculturist are transforming a country which forty years ago was black with game, and being British it pauses in each dominion at the sanctuaries where the wild elephant and all his contemporaries or in another hemisphere the elk, moose, and beaver are kept free from harm that future generations of Englishmen may have an inkling about the world as their forebears knew it.

Surpassing the Roman Empire

IN final soliloquy it observes the area of England's self-governing dominions surpass the greatest compass of the Roman empire five times over, and that the farthest border of the Roman empire was 2000 miles from the capital

whereas the most distant outlier of England is 12,000 miles from London. The population, it points out, is most unequally distributed; in the two small islands that constitute the United Kingdom there are 45,000,000 persons and in the 7,000,000 square miles of the five overseas dominions,—in this respect, as in all others, the report leaves out of account India, Egypt, and other portions of the British empire that are not self-governing,—there are but 20,000,000.

A Pleasurable Contemplation

A TRAVELOGUE was not the purpose of the report, however. Resources and not scenery constituted the main quest. That some very satisfactory statements are possible goes without saying. Of nickel Canada comes pretty near to having a world monopoly, and it produces 80 per cent of the world's asbestos. South Africa turns out forty per cent of the world's gold and ninety-five per cent of the diamonds. Sixty-five per cent of the world's tin is controlled in the British empire. Great copper-bearing areas in Australia and potential oil fields in northern Canada await development. In other important materials the British empire is equally fortunate. It has 40 to 45 per cent of the world's clip of wool, and over 200 million pounds more than it needs for its own consumption. Of wheat it normally raises 96 per cent of its own requirements.

In articles which it has been importing into the United Kingdom from foreign sources, such as iron ore, lumber, and cotton, it has potential resources of great extent. Their development and the creation of a self-contained empire in material things is the main theme of the report which shows the United Kingdom as the heart of an empire of self-governing peoples whose greatest achievements are still in the future.

Economic Value of Negro Education

THE agricultural and industrial education of the negro is the rational solution of the "negro question." We must understand that the negro has an economic place in our scheme of things and we must educate him to fill it. That is the central thought of a report on the "economic value of negro education" issued by the Committee on Statistics and Standards of the Chamber of Commerce of the United States.

The report points out that the negro problem has always increased in difficulty in direct proportion to the number of negroes. There are ten million negroes in the United States—11 per cent of the population. Of these, 90 per cent are in the South, where they form 30 per cent of the population.

In spite of his ancient background of generations of savagery and slavery, the negro has shown marked capacity for progress and improvement, provided he has had the benefit of contact with and guidance of white people.

In the opinion of the committee, the thing of first importance in giving the negro a secure and legitimate economic position, is to put a speedy end, through education, to the illiteracy which is now one great drawback toward making him economically useful. On the present percentage of negro illiteracy rests the undue proportion of crime and mortality which negro statistics show.

Not only must negro illiteracy be reduced, but negro education should tend definitely toward agricultural and industrial training.

Of these, agricultural training may be regarded as the more important for the majority of negroes. They thrive best in the country, and away from the complicated and crowded life of the cities. Not all negroes, however, can be diverted to rural life. In the cities are immense numbers of negroes engaged in occupations, poverty stricken, and needing to reach a better state of economic independence. The same is true in the South. Industrial education is the solution.

Chambers of Commerce Producing Results

To the Editor of NATION'S BUSINESS.

1. In answer to the recent appeal of the Civilian Personnel Section of the Ordnance Department for assistance by the chambers of commerce throughout the United States, the response was so instantaneous, enthusiastic and prolific of results that it is desired through your columns to voice the appreciation of the effective efforts exerted in this connection.

2. A large percentage of the inquiries, resulting in the filing of formal applications, is directly traceable to the work of the chambers of commerce. There is no more valuable way of aiding the prosecution of the war than in the recruiting of civilian workers for service in the production of arms and munitions.

3. By direction of the Acting Chief of Ordnance.

Respectfully,
L. H. VAN DUSEN,
Major, Ordnance N. A.

Full Coiffers in Argentina

MONEY in abundance has some comforting qualities, for individuals and nations. Argentina just now is looking with some satisfaction upon the amount of currency to which it had attained in March,—something like forty-seven dollars per capita.

Toward this situation an arrangement entered into several months ago by Argentina and the United States has contributed; by agreement between the two governments, persons here owing money in Argentina deposit it with the Argentine ambassador while Argentine currency to the same amount is issued in Buenos Aires. Our importers had already made deposits here in excess of the forty million dollars contemplated in the first agreement.

Argentina's abundance of money is having its effects. The country for the first time has more capital than it needs for its industries and trade. Even country banks are offering to lend to the government. Income-yielding securities are advancing in price, because of the demand for use of surplus credit, and real estate is from all appearances recovering from the effects of the bad times that immediately preceded 1914.

China's North and South

CHAMBERS OF COMMERCE, according to a story which comes by way of London, are setting to work to create something like national unity between the North and South of China. If they are able to remove an ill-feeling which has been bitter enough to result in armed clashes they will achieve a feat of constructive patriotism.

That Chinese chambers of commerce should succeed in such an enterprise, if they undertake it with unmixed motives, goes without saying; for they are institutions of real power. They play a great part in the discussion and decision of every public question,—political and social as well as economic. They even aid the government at times in enforcing the laws.

These institutions, of course, are wholly Chinese in origin and development. The power and authority they wield they get from their mode of organization; for they are essentially federations of the trade and artisan guilds of their districts. Each guild elects directors to manage its affairs, and these directors ex officio become members of the local chamber of commerce.

U. S. A. Lines All Points

(Concluded from page 15)

are added to the staff. Each step taken is intended to aid in the accomplishment of two fundamental purposes—to use present transportation facilities to the best advantage during the period of the war and to add to present facilities whatever improvements and extensions are necessary to enable the railroads to furnish adequate transportation service after government operation is over and the railroads are returned to their owners.

THERE has been prepared by the Railroad Committee of the United States Chamber of Commerce a graphic map showing the organization of the United States Railway Administration, together with its personnel. Copies of this will be sent to subscribers of THE NATION'S BUSINESS upon request.



A successful foundry, designed and built by us for the Saginaw Malleable Iron Co., Saginaw, Mich.

The Power of an Idea

Something like twenty years ago the idea of a complete industrial engineering service for the assistance of manufacturers and the construction of better and more productive industrial plants began to formulate itself in the mind of a young man then attending the "Boston Tech."

He made the idea welcome and it began to grow. It had its ups and downs, but at last it took tangible shape, and today the organization thus conceived has wide accomplishment in the plants that it has built.

Today we are prepared to design and

build for you the one best plant or factory for your purpose, in minimum time and at the lowest possible cost. We do so after careful study of your particular needs, giving you increased profits through the production economies effected by proper layout and design.

This illustrates in a slight way the power of an idea—and the end is not yet. If you would like to have this power employed in your behalf, write for our booklet "A Better Way to Build Your New Plant."

Frank D. Chase

INCORPORATED

Industrial Engineers

Chicago, Peoples Gas Bldg.

Whitehall Bldg., New York

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offices of the Societe Generale
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WANTED—TO BUY—a small iron
and wood working plant, preferably
making farm machinery, in small town,
with plenty of land for expansion. Address
box 12, Nation's Business.

Finding Their Place in Shop and Store

Returning Soldiers and Sailors Will Find, in a Card Index File, Infor-
mation as to Where There is a Job for Them Despite
Halting Steps and Sightless Eyes

SERIOUS disabilities resulting from active
war service, unless of a character to render
a man incapable of any effort whatsoever,
need not debar him from earning a livelihood,
and they will not, if the agencies being set
in motion do not fail of their object. Even
for the man who has suffered the loss of both
hands there is remunerative work. Bringing
together the war-crippled soldier, sailor or
marine and the job into which he fits is being
made the concern of state governments as well
as of the national government, and some very
practical plans are being laid against the day
when the line of stricken men will begin to
straggle back from Europe.

The state of Pennsylvania is a case in point.
By means of a questionnaire sent broadcast
throughout the state, the Bureau of Employ-
ment of the Pennsylvania Department of
Labor and Industry has established the inter-
esting fact that 42,111 men crippled or perma-
nently disabled through war service may find,
in that commonwealth, suitable employment.

More than half of these openings are in
skilled tasks which may be performed by men
who have lost one or both legs, an arm, or who
are handicapped by some other disability.
Places of employment range from steel mills
to dairies, from silk mills to railroads, from
cigar factories to paper mills, and from lumber
camps to department stores.

These employment opportunities are classi-
fied and card-indexed according to industry,
locality, occupation, and disability of workers
to be employed. Every Pennsylvania em-
ployer who can give employment to war
cripples is urged to notify the Department of
Labor and Industry. The number of jobs
brought to light by May 1 was 42,111, but it
is constantly growing, as replies are still
being received.

Pennsylvania is one of the first states of the
union to cooperate actively with the national
authorities in the effort to prevent war cripples
from being shunted merely into by-
product tasks. These authorities are plan-
ning to equip each disabled soldier and sailor
with every suitable appliance to bring his
physical efficiency to a maximum and to give
suitable treatment and training to adapt him
for tasks in industry he can most advantage-
ously perform. From the classified employ-
ment lists of the Department of Labor and
Industry, each Pennsylvania soldier, sailor
and marine disabled in war service will be
able to obtain, from thousands of openings, in
his home state, a task for which he is best
suited physically, a task that will give him
greatest financial return according to his
capability and probably in the city or town
where he most desires to reside.

The questionnaire sent to employers by the
Department of Labor and Industry, desig-
nated 38 general classes of disability which
might result from war wounds to handicap the
soldier or sailor when he desires to engage in
industrial work.

The largest number of positions open to
disabled men are available to those who return
with repulsive facial disfigurements, employers
reporting that they have jobs for 5783 such
men. Next come those who have suffered
only the loss of fingers on one hand. In this
classification are 4451 places, while there are
places for 729 with fingers missing from both
hands. There are three jobs for men with

both hands amputated at the wrist and 458
with only one hand gone. Loss of one arm
below the elbow, 374; loss of one arm at
shoulder, 328. Men to the number of 2321
with stiff finger joints on one hand, and 2014
similarly afflicted as to both hands, will be able
to find employment. Six hundred and four
with stiff wrist joint, one arm, and 499, both
arms, can be provided for.

Other classifications are—stiff elbow joint,
one arm, 897, both arms, 72; stiff shoulder
joint, one arm, 521, both arms, 80; partial
loss of foot, 2149, both feet, 599; loss of foot
at ankle, one foot, 1074, both feet, 401; loss
of leg below knee, one leg, 993, both legs, 175;
loss of leg at knee, one leg, 649, both legs, 73;
loss of leg at middle of thigh, one leg, 491, both
legs, 52; loss of leg at hip joint, one leg, 795,
both legs, 48; stiffness of lower extremities,
one leg, 432, both legs, 113; blindness in one
eye, 4021; deafness, one ear, 3642, both ears,
501; loss of speech, 2981; hernia, 909; general
health impairment preventing heavy manual
labor, 1321, miscellaneous, 1558.

Baruch

(Concluded from page 23)

federate army, he served three years on the
battlefront and was twice captured—at South
Mountain and Gettysburg.

Old Lazarus Straus moved from Georgia to
New York so that his sons could be educated
and they became merchants, philanthropists
and diplomats. The same high purpose caused
Dr. Simon Baruch to leave South Carolina.
He rose to eminence in the North as a sur-
geon, author and physician and is living today
and working today for humanity.

After leaving college Bernard Baruch was
employed in a small bank. While a clerk in a
broker's office, he studied law and accounting.
He was a millionaire at the age of thirty,
buying near the bottom and selling near the
top; ignoring rumors but reading the ticker
and the newspapers and knowing always that
twice two are four and never three, five or eight.

**STATEMENT REQUIRED BY THE ACT OF
CONGRESS OF AUGUST 24, 1912, OF
THE NATION'S BUSINESS**, published monthly
at Washington, D. C., for April 1, 1918.

WASHINGTON, D. C.: Before me, a Notary Public in
and for the state and county aforesaid, personally
appeared John G. Hanrahan, Jr., who having been duly
sworn according to law, deposes and says that he is the
Business Manager of THE NATION'S BUSINESS, published
by the Chamber of Commerce of the United States of
America, and that the following is to the best of his knowl-
edge and belief, a true statement of the ownership, man-
agement, etc., of the aforesaid publication for the date
shown in the above caption, required by the Act of August
24, 1912, embodied in Section 443, Postal Laws and Regu-
lations, printed on the reverse of this form, to-wit: 1. That
the names and addresses of the publisher, editor, managing
editor, and business manager are: Publisher—Chamber of
Commerce of the United States of America, Washington,
D. C. Editor—Merle Thorpe, Washington, D. C. Man-
aging Editor, none. Business Manager—John G. Hanrahan,
Jr., 2. That the owners are: Chamber of Commerce of
the United States of America, Washington, D. C. Said
body being an incorporated organization under the
laws of the District of Columbia, its activities being gov-
erned by a Board of Directors, the officers and members of
which are as set forth in Exhibit A, attached herewith.
3. That the known bondholders, mortgagees, and other
security holders owning or holding 1 per cent or more of
total amount of bonds, mortgages, or other securities are:
None.

JOHN G. HANRAHAN, JR.
Business Manager.

Sworn to and subscribed before me this 24th day of
April, 1918.

ERNEST H. BALL, Notary Public,
New York County—20.

(My commission expires March 31, 1920.)

Slender Props For Foreign Trade

(Concluded from page 17)

that at which the rest of your output is sold.

To put it another way, it is more than questionable whether overhead, or general expenses, should be permanently distributed in such a way that any part of the sales will be made without due consideration of this burden. As a matter of permanent policy, every part and parcel of the output should bear its due share of the total cost of bringing it to market. If in the long run it does not so bear its due share,—if it is sold in such a way that the overhead or general expense is not properly debited against it,—then sooner or later the rest of the output must bear more than its due share of the general expense. The overhead must necessarily be paid for somehow. No part of a business really pays which fails to pay its proportionate share of the expenses of conducting it. This is no less true of foreign trade than of domestic trade; no less true for the country at large than for a separate business. Sales may be made occasionally without regard to general cost, and even with little regard to the direct or specific expenses entailed for the particular items.

In the long run, however, and as a permanent policy, sacrifice sales and special price sales are not profitable to the individual business, and are not profitable to the nation. In our discussions of foreign trade and of foreign trade policy it is the permanent conditions and the long run results which we must primarily bear in mind. The continuous and successful expansion of foreign trade must rest not upon sporadic or occasional transactions, but upon those which can be continued with advantage year after year, and on essentially the same basis year after year.

How to Buy Books

(Concluded from page 31)

several departments of a business are explained and various methods of profit sharing are described.

Salesman's Correspondence Manual, Dartnell, Chicago, 1917, \$1.00. It contains salesmen's letters and reports to the home office and communications to customers and probable buyers, and is a useful handbook for salesmen.

Cooperative Marketing, by W. W. Cumberland, Princeton University Press, 1917, \$1.50. The advance of cooperation is exemplified in the California Fruit Growers' Exchange, and the methods of such cooperation and its benefits are outlined here. The Exchange consists of 800 orchardists united into 117 local packing exchanges, each handling fruit on a cost basis; of 17 district selling exchanges, or clearing houses; and of the central exchange, which, under president and directors, provides market facilities, issues daily bulletins of market information, advertises, owns the "Sunkist" trade mark, handles litigation, and retains an organized selling force of 75 offices and 200 salesmen. This book should give great stimulus to cooperation in other lines.

Department Store Merchandising Manual, published by the Ronald Press, 1917, under editorship of B. E. Kennard, \$1.25 per volume. This series includes 25 volumes, of which five have been issued,—cotton and linen department; jewelry department; leather goods; notions; and stationery. Information is given for sales-people about the merchandise sold. Technical points are turned into selling points. These manuals furnish the basis for training in good salesmanship—a knowledge of the goods to be sold.

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A primitive, comfortable and exclusive business men's fishing, hunting and rest camp in the wilds of Ontario away from the beaten trail—a new district not fished out.

A vacation at Ka-Wig-a-Mog means a complete change in your mode of living, relief from mental weariness, rest and relaxation—a real vacation.

The wonderful fishing, beautiful scenery, splendid climate, interesting motor boat and canoe trips, excellent food and comfortable sleeping cabins are all emphasized in over a score of letters from representative business men who were guests last season of this American owned and managed business men's Camp. Correspondence invited.

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MANAGING DIRECTOR

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An American Trade Journalist who has spent **5 years** in studying trade and traffic in more than **40 different countries around the world** has returned to the United States. Possesses first-hand facts; notebooks bulging with data useful for chambers of commerce and journals interested in the **rebuilding of the nations**. Talked with rulers, peasants, statesmen, editors, business builders. His articles published weekly for last 6 years and widely republished in Europe, Australia, and South America. Received military, legal, and diplomatic training, resulting in systematic and thorough work.

Has spent much time as unofficial observer with Japanese, English-Hindu, Egyptian, Mexican, and South American Armies.

Can act in advisory capacity to Government war commissions.

IF INTERESTED ADDRESS

Box 31, 1842 SIXTEENTH STREET
WASHINGTON, D. C.

Free Ports and World Trade

By GEORGE FARLEY

THE advantages of free ports are being dwelt upon in strong terms and in many places in this day of planning for after-the-war. In the United States, in England, in France—everywhere that men are turning to an examination of the foundations of trade, movements are afoot for the wiping out of customs supervision in relation to goods destined for transshipment.

Free ports are not free trade. The establishment of such zones in this country therefore would not enable a citizen of Ohio to escape payment of the import duty of 2 cents a pound on a bushel of prepared acorns. It would however permit the entry of the acorns duty free if they were to be sent on to England or Argentina, or whatever other countries buy prepared acorns.

Transshipment plays a large part in foreign trade. Rice from the Orient for Cuba often travels by way of San Francisco. Tea from India and China goes to London and is there blended and packed for tea bibblers in many lands and under many climes. Hamburg is a classic example of a free port, and it is said that her overseas lines, in the good old days before the war, carried home more freight for non-German Baltic ports than for the interior of Germany. So far as German tariff laws are concerned, the port of Hamburg is foreign soil. Only when her imports find their way into the interior do customs officials have anything to say about them.

THE purpose of free ports is to do away with the annoyance of tariff regulations in cases with which the tariff has rightly nothing to do. Congress in levying a tax of 2 cents a pound on the importation of prepared acorns meant acorns to be used in this country. To impose a

duty on goods which are merely passing through our ports is to penalize those who are willing to pay us for the use of our facilities. Drawbacks would be possible, of course, that is, paying the duty and then getting it back when the merchandise is reexported, but that involves tying up great quantities of capital, unwinding much red tape, delays, bickerings, controversies, bookkeeping and ruffled feelings.

NEW YORK has been reaching out for years for a free port. The Pacific coast too is debating the question. And perhaps the Gulf states may be interested. The setting up of these free zones here would mean that foreign goods not to be consumed in the United States could be imported and reexported as freely as if we had no tariff laws whatever. Those goods might be raw materials to be transshipped in their original state, or they might be manufactured articles. They might be raw materials to be made into various articles here and then reexported, or semi-manufactured goods to be finished here.

It is urged for free ports that they would facilitate repacking, blending, mixing, cleaning and other commercial manipulation of merchandise which is to be transshipped. "Breaking of packages," now forbidden unless goods are threatened with damage, and then only under the strictest supervision, would be permitted. A shipper, for instance, could forward two or three articles out of a case to Salvador and two or three others from the same case to Guatemala. Or he could buy unsorted beans in Japan, Manchuria or Siberia and grade and pack them in San Francisco, paying duty on those to be consumed in the United States and reexporting the others.

Clearing the Terminals

(Concluded from page 13)

stacles to an experiment in the coordination of railroad and trucking facilities. Dominating the situation, the government has power to proceed as it sees fit. It may, for instance, at a single stroke change the face of conditions by laying down rules governing the admission of vehicles to terminals. Some persons have proposed that the railroad administration make store-door delivery a railroad function, and that it lease or purchase trucking equipment to carry out such a programme.

Others have advanced the proposition that trucking equipment be pooled under government supervision, and some have suggested a national arrangement dominated by the government but operated in each community by local interests somewhat after the manner of the telephone system. Whatever action the government may take, those who have studied the subject believe that the application of the principle to the facilities already existing is not only feasible but affords the most practicable means at hand for the relief of a difficult situation.

They contend that such adjustment of the affairs of shippers as would be called for by the proposed change would not, except in isolated cases, be burdensome. The bulk of

shippers, they say, would benefit greatly by economies which would be worked. Firms operating their own trucks could weld their facilities into the general scheme and thereby get from them capacity results. Whatever happens, there would be no call for the scrapping of equipment, for there would be no more than enough to go around under any arrangement which may be effected. Increased movement through terminals would take up much of the consequent slack. Merchants with storage facilities could easily adjust themselves to prompt deliveries.

IMAGINE the 48 hours of grace typified by our ancient postal card used to the full, and in many cases abused, and it will not be hard to picture conditions in which the entire terminal system of the country would be all but paralyzed. Probably we shall never be reduced to that, but even partial paralysis is a very serious affair. And the doctors have studied the case and declared that already we are suffering to that extent. Hence store-door or sidewalk delivery is offered not only as a preventive of ills which threaten us in the future but also as the means to improve the present state of transportation.



It Shall

THE stiffest specifications ever put up for a single grade of varnish are presented briefly in the column to the right.

Our Air-Plane Rexpar meets all these conditions and is specified and purchased by the United States Government, for general use in airplane work.

Our first order was for 16 carloads—the largest individual order for any type or make of varnish ever placed.

This order is a double compliment to Sherwin-Williams because it concedes our technical resources for achieving the most remarkable combination of qualities ever realized in one grade of varnish, and also our production capacity for turning out an emergency order of unprecedented volume.

Covering all the 34 "shalls" of the Signal Corps specifications, the Government inspectors are placing the seal shown at the top of this column, and that seal on Air-Plane Rexpar means

1. Protect wood.
2. Protect doped linen.
3. Protect doped cotton.
4. Protect metal.
5. Be long oil varnish.
6. Resist air.
7. Resist light.
8. Resist water.
9. Resist natural gas.
10. Resist illuminating gas.
11. Have proper brushing qualities.
12. Have proper flowing qualities.
13. Have proper covering qualities.
14. Have suitable body.
15. Dry dust free rapidly.
16. Harden rapidly.
17. Be elastic.
18. Be clear.
19. Be transparent.
20. Be highest quality.
21. Match a fixed color solution.
22. Be durable.
23. Not flash below 95 degrees Fahr.
24. Not whiten under water.
25. Not dull under water.
26. Not show defects under water.
27. Stand air test during application.
28. Stand air test during drying.
29. Meet a fixed setting test.
30. Meet a threefold drying test.
31. Meet a severe bending test.
32. Be inspected before shipment.
33. Be inspected at destination.
34. Prove durable under fixed test.

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ACCORDING to its custom for a number of years, The White Company is publishing its annual Roll Call of fleet installations (ten trucks or more) in national magazines and metropolitan newspapers.

The following summary for each year indicates the rate of growth of the installations which comprise ten trucks or more:

1910 . . .	54 trucks	1914 . . .	1746 trucks
1911 . . .	191 trucks	1915 . . .	2604 trucks
1912 . . .	508 trucks	1916 . . .	5132 trucks
1913 . . .	1021 trucks	Now . . .	7433 trucks

There is now a total of 2,153 White fleets in active service, aggregating 23,226 trucks, exclusive of all single installations.

The company takes a just pride in issuing this annual statement. Its year-to-year growth is so much more convincing than any argument—so much more extensive than any other figures presented in the industry.

A copy of the 1918 Roll Call will be sent to anyone interested on request

THE WHITE COMPANY

886 East 79th Street
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Sixth of a Series—Canned Goods

War time imposes new stresses upon production. Canned foods for instance must be put up and shipped in almost unlimited quantities. Millions upon millions of Hinde & Dauch boxes must be furnished for this service, for without well nigh inexhaustible supplies of corrugated fibre boxes immense quantities of food needed by the Army and the people could not be packed and shipped.

The continued lightness and strength of H. & D. boxes, their weather-resisting and shock-absorbing qualities and the money economies they bring into the packing room make them ideal packages for canned goods, as well as for an almost endless list of products as various as glassware and shoes—small machine parts and clothing, hardware and rubber goods and hundreds of others. Furthermore an immense volume of production insures the box supply of every user of Hinde & Dauch Fibre Boxes.

In an interesting book, "HOW TO PACK IT," we explain just how H. & D. boxes have given over twenty years of service to the largest shippers and how they solve unusual problems. It not only gives many practical suggestions but also contains valuable information which should be in your possession. A copy will be mailed upon request. Write for it.

THE HINDE & DAUCH PAPER COMPANY
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At the large silt-berk plant of the Mount Union Refractories Company, Mount Union, Penn., Autocar Motor Trucks have replaced horses—such Autocar takes the place of six one-horse dump carts. These Autocars are on the go twenty-two hours out of each twenty-four. At night they haul coal from the hopper, dumping a day's supply at each of the twenty-nine kilns; by day the trucks haul silt and ashes from the kilns and dump them at the river bank.



NIGHT—DUMPING COAL RIGHT AT THE KILN



NIGHT—LOADING COAL AT THE HOPPER



DAY—DUMPING ASHES AT THE RIVERBANK

The short wheel base of the Autocar makes it possible to operate where large trucks are impractical. With the Mount Union Refractories Company and with hundreds of other manufacturers the Autocar is part of the regular plant equipment.

THE AUTOCAR

CHASSIS \$2050

1½-2 TONS CAPACITY

WRITE FOR THE DESCRIPTIVE AUTOCAR CATALOGUE. IT LISTS SOME 6000 OF THE USERS OF THE AUTOCAR MOTOR TRUCK

BUSINESS houses in four hundred and fifteen different lines use the Autocar Motor Truck—an indication of the part the motor truck is playing in solving the nation's transportation problem.

Of these thousands of Autocar users some own one truck, some hundreds—using them for all kinds of trucking, over short hauls and long.

The confidence of this body of truck buyers is expressed by repeat orders—they know that the after-sale service placed at their disposal by the Autocar Company is an all-important factor in the efficiency and economy of their truck operation.

THE AUTOCAR COMPANY

Established 1897

ARDMORE, PA.

FACTORY, SALES AND SERVICE BRANCHES

New York
Brooklyn
Boston

Providence
Newark
Philadelphia

Atlantic City
Wilmington

St. Louis
Allentown

Baltimore
Washington

Pittsburgh
Chicago
San Francisco

Los Angeles
San Diego
Fresno

Represented by dealers at other points

(This advertisement appears in the Saturday Evening Post of May 4th and the Literary Digest of May 25th)